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THE CHEMIST AND DRUGGIST

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CONTENTS: Vol. LII. No. 16.

PAGE
A Guide to the New B.P. 639
Bankruptcy Reports 610
British Pharmacopœia, 1898 :—
  What Has Been Made Obsolete 612
  New Articles and Preparations 613
  Changes in Composition and Strength 617
  Nomenclature, Chemistry, &c. 625
  The Appendices 630
Business Changes 633
Colonial and Foreign News 606
Coming Events 654
Commercial Notes 649
Correspondence :—
  Pharmacy Bill and its Opponents; The British Pharmacopœia, 1898, and Wholesale Chemists; The Assistants' Union 651
  Chemists' Windows: Medical Education Spreading; The Lord Mayor's Sons; A Contradiction 652
  Dispensing Notes 652
  Legal Queries 653
  Miscellaneous Inquiries 653
  Information Supplied 654
  Information Wanted 654
Deaths 641
Dispensary Pharmacy 644
Editorial Comments :—
  The British Pharmacopœia, 1898 634

PAGE
Editorial Comments (cont.) :—
  Bad Export Business 634
  French Law on Trade-marked Medicines 636
  The British Pharmacopœia, 1898: Important Offer to Subscribers 636
  The Council Election 636
English News 603
French News 606
Irish News 604
Is B.P. "Chlorodyne" a Blunder? 639
Legal Reports 610
Marriages 641
Medical Gleanings 640
New Books 608
New B.P. Preparations 640
New Companies and Company News 632
Personalities 633
Pharmaceutical Society of Great Britain :
  "First" Examination Paper 607
  Examinations in London and Edinburgh 603
Scotch News 605
Side Lines for Chemists 637
Students' Corner 602
The January Minor 643
The New Pharmacopœia (I.) .. 638
Trade Notes 633
Trade Report 645
Wills of Deceased Chemists 633
Winter Session 642

COLONIAL TRADE.

IF there is one thing more certain than another regarding the future export-trade of the United Kingdom it is that the population of our Empire beyond the seas will be our best customers. We back them up, buy their raw products, and they take our manufactures in exchange. This will go on increasingly, and, so far as THE CHEMIST AND DRUGGIST is concerned, the encouragement of colonial trade has been one of its strong points from the outset, while through the annual Colonial Issue we give an exceptional opportunity for advertisers to increase their business with the colonies. This issue will be on April 30, and, in addition to those who receive it weekly, it will be sent to all buyers of druggists' goods in India, Burmah, Straits Settlements, South Africa, China, Japan, and the West Indies. The publisher will be happy to give any inquirer full information regarding this important issue.

* * * *

Firms preparing supplements for our Summer Number are advised that this will be published on July 30. Twelve thousand will be required.

SUMMARY

TWO German Chemical Company dividends are reported on p. 632.

NEW GERMAN patents for the manufacture of codeine and saccharin will be found on p. 606.

THE NAMES of a score of chemists who have been elected to public offices appear on pp. 603–4.

TRIPOLI TRADE and the United States trade in chemicals and drugs are subjects in Commercial Notes, (p. 649).

A POOR BUT PROUD IRISH CHEMIST is severe on some of the exhibits in Dublin chemists' shop-windows (p. 652).

PARTICULARS of French decisions refusing protection to such trade-marks as chloralose and salol are given (p. 636).

PORTRAITS of the late Mr. Leicester, of Burslem, and of the late Mr. Marson, of Stafford, are given in our obituary section (p. 641).

A SHARP CRITICISM of company pharmacy, as illustrated by Lewis & Burrows's last report, is quoted from a financial authority (p. 632).

THE first quarter's British trade returns show a falling off in exports of chemicals and druggists' goods. Imports are larger (p. 635).

THE FRENCH ANTI-CUTTING SCHEME is finally arranged. Over 5,000 chemists and 51 proprietors have associated themselves (p. 606).

INSTRUCTIVE COMMENTS on the analytical exercise in the Corner for Students are given by Mr. Moss in his report on the last competition (p. 602).

TRADE has scarcely thrown off its holiday garb in the "Lane" yet. Phenazone has gone higher, and cod-liver oil seems to be going that way (p. 645).

AN AMUSING series of sketches depicting a day with a chemist is reproduced from *Moonshine*, on p. 650, by permission of the editor of that journal.

A WORCESTER CHEMIST told a coroner that it was expecting too much of him to caution children who bought laudanum at his shop (p. 604).

MR. MCKNIGHT, of Belfast, who is associated with Ulster Chemists (Limited), has penitentially submitted his resignation to the Council of the Pharmaceutical Society of Ireland (p. 609).

THE MEDICAL COUNCIL have obtained a magisterial decision against an apothecary who described himself as a physician and surgeon. The case may be carried further (p. 610).

THE NEW PHARMACOPŒIA is offered to subscribers at 8*s.*; pamphlets, in which our review of the work is reprinted, at 2*s.* 6*d.* per dozen for distribution to medical men; and prizes for couplets on the Council election are announced (p. 636).

THE VICTORIAN COURT OF APPEAL has rejected the appeal of the Board of Pharmacy in the pink-pills case, and has ruled that as a proprietary medicine, though they contain a small proportion of arsenic, they need not be labelled "poison," and may be sold by unregistered persons (p. 610).

MR. MCKELLAR, Glasgow, writes to explain the withdrawal of his opposition to the Pharmacy Bill, but it appears from another communication that Mr. Cross, M.P., is not disposed to abandon his opposition to the Bill until he sees what the Government intend to do in regard to the sale of poisons (pp. 605 and 651).

ALL the new articles in the British Pharmacopœia, 1898, the changes that have been made in old preparations, the advances in chemistry, and other B.P. subjects, are fully discussed on pp. 612–632. Mr. F. W. Fletcher and Dr. J. C. McWalter adversely criticise points in the new B.P. (pp 638–9). Mr. J. C. Umney has written a "Guide" to it (p. 639); and Mr. George Coull adverts to Mr. Charles Umney's firm taking trade advantage of an official position (p. 651).

B—C

STUDENTS CORNER

Conducted by Richard J. Moss, F.C.S., F.I.C.

Qualitative Analysis.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by *a stamped and addressed envelope*, not a stamp merely) will be received up to Wednesday, April 20, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, April. 30, Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

Reports.

The mixture of salts distributed for analysis last month consisted of equal parts of magnesium carbonate, potassium nitrate, and sodium sulphite. Its calculated composition was:—

Mg	8·38
K	12·87
Na	5·01
SO_3...	8·71
NO_3	20·46
CO_3	15·71
O	1·40
H_2O	27·46
	100·00

The mixture contained sulphuric acid as an impurity, also traces of calcium, iron, and chlorine.

Samples of the mixture of salts were sent to 69 applicants, and in reply we received 49 reports of analyses. Magnesium and sodium were detected by all our correspondents; three only failed to detect potassium. The acid radicles were not so successfully dealt with; there were eleven failures to detect the sulphurous radicle, while in the case of the nitric and carbonic radicles there were five failures each.

It is remarkable that so many students failed to observe the strong and very characteristic smell of sulphur dioxide evolved when the powder was treated with an acid. In the days of sulphur matches everybody was familiar with the smell of burning sulphur; now it is necessary to make the experiment expressly, and to burn some sulphur, or decompose a sulphite, for the purpose of observing the peculiar and once familiar odour.

The fact that the powder when decomposed by an acid evolved two gases was not noticed by several students. A few recognised the sulphur dioxide. and concluded that it alone was the cause of the effervescence produced by a strong acid; others found that the gases evolved produced a turbidity in limewater, and concluded forthwith that only a carbonate was present. There was a distinct advantage gained by making two separate analyses, one of the part soluble in water which contained the sulphite, the other of the part insoluble in water which consisted of a carbonate only.

Apart from the detection of the sulphite by the odour of the sulphur dioxide evolved, it should have been detected by the reducing-action of the gas on a chromate or manganate, or by the behaviour of the sulphite with a barium salt Barium sulphite is insoluble in water, but dilute hydrochloric acid decomposes it, dissolving the barium as chloride, while the sulphur dioxide remains in solution, probably as sulphurous acid. On adding any reagent capable of oxidising the sulphurous acid to sulphuric acid, such as chlorine or nitro-hydrochloric acid, a precipitate reappears, but this time in the form of barium sulphate. Similar reactions may be obtained with a lead salt instead of a barium salt. A more characteristic reaction is produced by reducing instead of oxidising sulphurous acid. If a sulphite be added to dilute hydrochloric acid, from which hydrogen is being evolved by the action of zinc, the sulphur dioxide is deoxidised, and its sulphur converted into sulphuretted hydrogen, which may be recognised by its smell and by its action on lead paper.

Prizes.

The First Prize for the best analysis has been awarded to

T. H. H. Francis, c/o Mr. Rossiter, Pharmaceutical Chemist, 9 Grand Parade, St. Leonards-on-Sea.

The Second Prize has been awarded to

Arthur E. King, c/o Messrs. Fuller & Co., Norwich.

Marks Awarded for Analyses.

T. H. H. Fraucis (1st prize)	100	Triem	85
A. E. King (2nd prize) ...	99	Vectis	84
Africanus	97	D. J.	83
C. J. Packham	95	L. R. D.	82
Dover	95	Hinsley	80
Huxham	94	X. Y. Z.	80
Acetylene	94	Methodical	78
A. E. Beeston	93	Burnell	75
Parmelia	93	Algol...	75
A. J. B.	92	H. W. H	75
Lyra	92	Crucible	73
Galen	92	J. A. Goode...	73
Sepiæ	92	White Rose	72
Hydrargyrum	92	J. S.	71
Conor	91	J. Scriven	70
W. H. Hurn	91	Victor	68
Trojan	91	B. P. S.	67
R. T. S.	90	Kieselguhr	65
Hibernia	90	Ctenophora...	65
J. Burns	90	A. Crossley	62
Karlachan	89	Beginner	50
Edrith	89	Spes	50
R. Pickup	88	R. Graham	45
W. S.	87	A. R. J.	35
Triandwin	87		

To Correspondents.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

Note.—All communications should include the names and addresses of the writers.

Triem.—The red colour you obtained with ferric chloride may have been due to a slight excess of alkali producing a precipitate of ferric hydroxide. If under the conditions of your experiment any reduction of nitric acid took place, the nitric oxide evolved would dissolve in ferric chloride with the production of a dark reddish-brown colour.

Vectis.—The powder was quite free from ammonia: the alkali you used must have come in contact with the test-paper.

D. J.—The precipitate you obtained with barium chloride was barium sulphite, soluble in dilute hydrochloric acid, except the trace of sulphate that was present.

L. R. D.—See remarks to "Vectis."

Hinsley.—You should have noticed that the gas evolved on treating the powder with an acid smelt strongly of sulphur dioxide.

X. Y. Z.—Having found that the only metals present were the alkali metals and magnesium, it was waste of time to boil the powder with sodium carbonate preparatory to examining it for acid radicles.

Methodical.—The important point you overlooked was that the addition of an acid to the part of the powder soluble in water caused the evolution of a gas smelling of sulphur dioxide.

Burnell.—The dry powder treated with sulphuric acid gave reddish nitrous fumes which were very conspicuous on applying heat. You seem to have mistaken the smell of these fumes for acetic acid.

Algol.—See remarks to "Burnell." Nitrous fumes were also produced when the dry powder alone was strongly heated, but in this case they might readily have escaped observation.

H. W. H.—See remarks to "Algol." You boiled the solution of the powder with dilute sulphuric acid, thus boiling off the nitric acid; if the boiling were continued long enough all the nitric acid would have been expelled.

Crucible.—The portion insoluble in water dissolved in dilute acids with effervescence, the gas expelled being odourless, and rendering limewater turbid.

J. A. Goode.—There was a decided advantage in this case in making separate analyses of the soluble and insoluble portions. See remarks to "Crucible."

White Rose.—The bleaching-effect you observed was due to sulphur dioxide, not chlorine; the smell of the two gases is totally different.

J. S.—The smell of sulphur dioxide is most characteristic. You ought to have noticed that this gas was evolved as well as carbon dioxide. You observed that the barium precipitate was "insoluble in hot sulphuric acid," a peculiarity that of necessity applies to all barium precipitates, because the treatment would convert them into insoluble barium sulphate. What you should have noticed was that the precipitate dissolved in dilute hydrochloric acid, with the exception of some insoluble sulphate present as an impurity, and that on adding chlorine water or nitrohydrochloric acid the dissolved salt was converted into insoluble sulphate, thus proving it to be barium sulphite.

J. Scriven.—It can scarcely be possible that you do not know the smell of burning sulphur, yet you seem to have mistaken sulphur dioxide for acetic acid.

Victor.—Dilute hydrochloric acid was the proper solvent to employ for the barium precipitate. See remarks to "J. S."

B. P. S.—See remarks to "J. S."

Kieselguhr.—The cobalt test is useful for the identification of certain white infusible oxides; it should not be applied to fusible salts, which may dissolve cobalt oxide, forming a blue mass. Your precipitation of a hydroxide, soluble in sodium hydroxide, and yielding a white sulphide, is quite inexplicable. Imagination must have played a prominent part in these reactions.

Ctenophora.—The colour of the sulphuretted hydrogen precipitate showed the absence of tin. You should have noticed the smell of the gas evolved when the powder was treated with a dilute acid.

A. Crossley.—There was no arsenic in the powder, and if it had been present the experiment you describe would not have produced arsenetted hydrogen; the arsenic would have been volatilised as chloride.

Beginner.—You assumed that the effervescence was due to one gas, whereas two were concerned in the reaction. See remarks to "J. A. Goode."

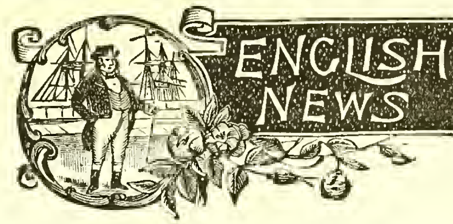
Spes.—The flame-test is not sufficient for the detection of potassium in the presence of sodium, unless you employ the spectroscope. You should have tried to precipitate the potassium as potassio-platinic chloride, or as potassium hydrogen tartrate.

Robert Graham.—You omitted to note the colour of the sulphuretted hydrogen precipitate; it was not dark enough to contain an appreciable quantity of bismuth sulphide, a black compound. See remarks to "Spes" and to "J. S."

A. R. J.—Unless clear proof of the absence of nitrogen acids is obtained in the course of an analysis you should apply the ferrous-sulphate test. See remarks to "Vectis," "Spes," and "Scriven."

M. Camille Flammarion, the French astronomer, has undertaken to cinematograph the sky. He takes 3,000 photographs every fair night, and expects to reproduce a most realistic representation of the movements of the moon and stars.

Poetry-prices.—She (at the reception): "Well, Mr. Rott, how is poetry now?" Mr. Rott (rising young poet): "Very dull, indeed. Patent-medicine verses bring only 5*s*. a hundred words, no activity at all in porous-plaster ads., and in the slump of prices yesterday children's-food rhymes went down thirty points in fifteen minutes."



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Chemist's Suicide.

In last week's *C. & D.* we reported the sudden death of Mr. W. R. Taylor, chemist, Middlesborough. It now appears that the case was one of suicide, and an inquest was held on April 4, at the Leeds Hotel, by the Deputy-Coroner, Mr. H. Mackereth. Evidence was given that the deceased had been harassed by business-worries, and in a fit of depression had taken prussic acid. The jury returned a verdict of suicide while temporarily insane.

Fond of Seigel.

An inquest was held last week by the West Ham Coroner on the body of a young man, named George Evans, who had committed suicide by taking strychnine, which he had purchased from a local chemist, saying he wanted it for poisoning dogs. From the evidence it appeared that deceased was very fond of patent medicines, and his mother asserted that he had drunk as many as three bottles of Seigel's syrup a day. The jury returned a verdict of suicide while temporarily insane.

Oxide of Zinc a Poison.

At the Bath Police Court last week a man named Johnson was charged with attempting to commit suicide by taking oxide of zinc. Mr. J. W. Gatehouse, city analyst, said that oxide of zinc was undoubtedly classified as a poison, and he should describe it as a poisonous substance. If a large quantity of oxide of zinc were taken it would be deleterious to health, but he could not state whether it would be dangerous to life, as there was no evidence or authority on that point. Its action upon the human body depended upon the contents of the stomach. Prisoner was committed to the Quarter Sessions.

Fires.

A destructive fire occurred on the morning of April 6 at the chemical-manufacturing works of Messrs. Riley Brothers, Clayton and Great Harwood. The stables (with three horses) and the storeroom were burnt to ashes, but the office and part of the manufacturing department were saved. The damage done is estimated at about 5,000*l*., and the fire is supposed to have been caused by spontaneous combustion.

On April 8 it was reported that fire had broken out on the premises of Messrs. Boot, chemists, London Road, Liverpool, but subsequent inquiry showed that the alarm was false, but that an explosion had occurred, which had blown out the windows of the shop and of the rooms above. The origin of the explosion is not known.

Acetylene-explosion.

Last week an explosion of acetylene gas occurred at the Milnrow Co-operative Stores, Rochdale. The gas-holders used by the society were those patented by Mr. Mitchell, chemist and druggist, Shaw, but the explosion was not caused through any fault of the holders, but by an ordinary leakage of the gas.

Chemists as Public Men.

The following gentlemen have been elected members of District Councils:—

Mr. Geo. J. Gostling, chemist and druggist, Stowmarket.
Mr. J. Osborne, chemist and druggist, Ashbourne.
Mr. John Birkett, chemist and druggist, Morecambe.
Mr. C. E. Taylor, chemist and druggist, Sedbergh.
Mr. John Brooks, chemist and druggist, East Ham.
Mr. E. L. Foss, chemist and druggist, Worcester.

Mr. P. D. Doble, chemist and druggist, Tavistock.
Mr. F. W. Bates, chemist and druggist, Stretford.
Mr. J. Fletcher, chemist and druggist, Scunthorpe.
Mr. F. Brown, chemist and druggist, Bracebridge.
Mr. J. Casterton, chemist and druggist, Market Rasen.

The following have been elected members of Boards of Guardians:—

Mr. George Eade, chemist and druggist, 72 Goswell Road, E.C.
Mr. J. J. Matthias, pharmaceutical chemist, Lewisham.
Mr. H. T Doble, pharmaceutical chemist, Tavistock.
Mrs. Walter, wife of Mr. F. H. Walter, chemist and druggist, Southampton.
Mr. L. Heap, chemical-manufacturer, Brandwood, Bacup.
Mr. E. Neale, chemist and druggist, Chippenham.
Mr. J. Gostling, chemist and druggist, Stowmarket.
Mr. Thos. Horrocks, manufacturing chemist, Prestwich.
Mr. S. Cook, chemist and druggist, Nottingham.
Mr. W. Ramsden, chemist and druggist, Fallowfield.
Mr. L. Arrowsmith, chemist and druggist, Newcastle.
Mr. T. S. Alder, chemist and druggist, Newcastle.
Mr. J. H. Heaton, chemist and druggist, Burnley.

Mr. F. W. Bird, chemist and druggist, Coventry, has retired from the churchwardenship of St. John's, a position which he has held for twenty-five years. The parishioners presented him a few years ago with a gold watch as an appreciation of his services.

At the Easter Vestry, St. Stephen's Church, Exeter, Mr. J. Hinton Lake (Vice-President of the Exeter Chemists' Association) resigned his office as rector's warden, a position he has held for nearly twenty years. A hearty vote of thanks was accorded Mr. Lake for his past services.

At the Easter Vestry, St. Sidwell's Church, Exeter, Mr. W. H. Dalgleish (manager for Messrs. J. Townsend & Son, medical-label printers) was appointed a churchwarden.

Mr. Edward Evans, jun., has been unanimously re-elected President of the Liverpool Liberal Federal Council.

Sequah's Versatility.

Somerton has had a visit from Sequah, described locally as "the well-known North American medicine-man," during the past week. In addition to conducting his nightly open-air addresses and sales, he organised a smoking-competition between seven men, and on Sunday afternoon gave a lecture at the Town Hall, which was crowded, to men only. Sequah concluded his lecture by giving a recitation entitled "The Man at God's Right Hand" (C. H. Spurgeon). In the evening he gave the history of his life, and recited another piece, entitled "The Road to Heaven."

Drug-contract.

The Barnstaple Guardians have contracted with Mr. S. Goss for the supply of cod-liver oil at 5*s.* 10*d.* per gallon, against 7*s.* 10*d.* paid last year; and quinine at 3*s.* 10*d.* per oz., against 1*s.* 6*d.* paid last year.

Chemists as Sub-postmasters.

The National Federation of Sub-postmasters held their annual conference at Nottingham on Easter Monday. The Federation was only formed last year at Wakefield, and so far its progress has been chiefly in the North and Midlands. Mr. J. Ranns (Wakefield), the President of the Association, occupied the chair. The following chemists were present:—Messrs. Fred Coates (New Basford, Nottingham) (President of Nottingham Branch), W. F. Palmer (Nottingham), W. K. Inglis (Delph), A. Hanson (Queensbury, Bradford), F. Lumby (Nottingham), J. T. Ruyson (Nottingham), F. B. Flint (Manchester), Silson (Bradford), J. Thorpe (Leeds), and John W. Cussons (Ossett) (Hon. Secretary). The President stated that certain concessions had been obtained, but they were expecting to get much more. Local branches had been formed in twenty-three important centres, and 838 members were affiliated. The Conference adopted a scheme drafted by Mr. Inglis, of Delph, for a Mutual Guarantee Association among sub-postmasters, and a thousand shares were taken. It was also decided to establish a journal, to be called *The Sub-postmaster.*

The Sale of Laudanum.

Mr. Thos. Silk, chemist and druggist, of 9 St. John's, Worcester, was a witness at an inquest held on April 6, by Mr. Coroner Hulme, on the body of a married woman named Brown, who poisoned herself by drinking laudanum. The deceased had suffered from occasional attacks of toothache but was not in the habit of taking laudanum. She sent two children, one aged 12 and the other 8, to Mr. Silk's for, in each case, a pennyworth of laudanum. Both children stated that Mr. Silk never asked what the laudanum was required for nor gave any caution as to its use. Mr. Silk in his evidence stated that he did not remember either of the children coming to his shop. They might have done so, and he certainly should have supplied them with laudanum if they had asked him. He did not warn them, because there was a poison-label on the bottle. Mr. Silk added that he was not bound by law to warn children in such cases. He served pennyworths of laudanum every half-hour of the day, and when customers were in the shop he could not warn every purchaser.

The Coroner expressed the opinion that Mr. Silk should have gone outside his legal rights and warned the children.

Mr. Silk replied that that was expecting too much.

A verdict of suicide whilst temporarily insane was returned.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

A Receiver in Chancery.

In the Recorder's Court, Londonderry, last Friday, John Slevin was convicted of feloniously receiving 60*l.* worth of drug-sundries stolen from Messrs. Rainey's pharmacy, Strand Road, by a lad named Devine, who had been formerly employed as a drug-porter in the store, and who is now undergoing a term of imprisonment. The Recorder deferred sentence on Slevin.

The Ulster Chemists (Limited)

announce that the amalgamation of the businesses taken over by them is now fully completed, and that arrangements for the retention of the late proprietors as managers are being made. They also state that the pharmacy in Lurgan, recently purchased, will be opened for business in the course of a few days.

Fires.

An apprentice was preparing an asthma-mixture at Tate's Medical Hall, Royal Avenue, Belfast, on April 8, in a large evaporating-pan over the fire. The compound suddenly exploded, and the apprentice and an assistant who came to his help were severely burned.

Last week a fire broke out on the premises of Messrs. J. & G. Boyd, druggists, William Street, Limerick. The roof and floors of the cement-stores were destroyed, and a quantity of stock injured by water.

Ballyhooly Lemonade.

This is how they make "whisky" in Ireland according to District Inspector Bell:—2 gals. of new whisky, 1 gal. of rum, ½ gal. of "finish," 1 dr. of sulphate of copper, and 3½ gals. of water. This particular "pison" owes its merit as "hard sthuff" to the S.V.M. and blue stone. It is sold as "fine ould Irish," said the Constabulary inspector to the Licensing Commission the other day.

Protests.

The Cork Chemical and Drug Company has written to the Wexford Board of Guardians, with reference to a report made by Sir Charles Cameron, saying they are surprised to learn that the tincture of scillæ supplied by them is not considered fully up to the B.P. strength. They say, in reply, that every tincture sent out by them is made strictly in accordance with the authorised formula, and this they are prepared to prove. If any deficiency in alcohol occurred, it must have been caused by evaporation, and the somewhat more than normal amount of extract pointed in that direction.

The Ulster Chemists (Limited) have sent a strongly-worded protest to the Strabane Board of Guardians against the method by which the contracts for the supply of medicines for use in the Union were recently selected. The Board replied, throwing the onus of selection on the medical officer.

A Legal Rip van Winkle.

In connection with a poisoning-case at present engaging attention in Dublin, the Magistrate last week objected to hear the evidence of Mr. Richard J. Moss, public analyst of the Royal Dublin Society, on the ground that he never knew of a case where such a witness, who was neither a surgeon nor a physician, was examined to prove the contents of a stomach. Mr. Moss quietly observed that he had been employed in making chemical analyses in similar cases for the past twenty years, and his ability had never before been questioned. The Bench thereupon subsided.

The Local Firm.

At a meeting last week of the Macroom Board of Guardians it was stated that out of a number of tenders for drugs and medicines examined that sent in by Messrs. Leslie & Co., Dublin, was the lowest. A motion giving the contract to Messrs. Leslie & Co. was defeated, and the tender of the Cork Chemical and Drug Company, the local contractors, was accepted by a large majority.

The Dispenser's Salary.

The South Dublin Guardians have increased the salary of their apothecary, Mr. Madder. It was stated that that officer was paid only 90*l*. a year, and that last year the L.G.B. refused to sanction an increase then proposed, on the ground that Mr. Madder was as highly paid as any other chemist in Ireland; but it had been ascertained that the apothecary at Limerick, who had only to compound for two doctors, as against five in Dublin, had 150*l*. a year, and that while in Limerick only 500 patients were in the infirmary, Mr. Madder had 2,026 persons to look after. The Guardians increased the salary by 10*l*.

No "Bovinine" for Waterford Paupers.

The L.G.B. have written to the Waterford Guardians stating that they have an objection to "Bovinine" being supplied to the Workhouse as an article of medicine.

Drug-contracts.

Messrs. John Clarke & Co., and Campbell & Doyle, chemists Belfast, competed last week for the medicine-contract to the Newtownards Union. The former house obtained the contract. The Ballymoney Board of Guardians have accepted the tender of Messrs. John Clarke & Co., Belfast, for the supply of drugs during the ensuing year.

Stealing Chemist's Goods.

Charles Reilly, who recently stole a quantity of goods from the Great Northern Railway station, which had been consigned by Mr. Smith, druggist, to a customer at Glenties, has been sentenced to a month's imprisonment with hard labour.

Put it on the Schedule.

An inquest was held last week in Garrycastle, King's County, on the body of a child under four years old, who died from drinking creosote, a bottle of which had been left carelessly on a dresser. The bottle was not labelled poison, and upon this fact the Coroner and jury strongly commented, emphasising the fact that a "poison"-label ought to have been placed on the phial.

Scotch News

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Curious Freak.

Mr. Wilson, chemist, Dunbar, has been entrusted with the preservation of a curious freak of nature which occurred in the vicinity. It is the head of a lamb, with the two eyes in the centre of the head, under one eyelid, where the nose should be—that organ being entirely wanting.

The Kinninmont Prize.

Those intending to compete for the Kinninmont Prize are reminded that April 30 is the last day upon which candidates' names can be received. Full particulars concerning the competition may be had from the Secretary, Mr. William L. Currie, 223 Byres Road, Dowanhill, Glasgow.

Mr. Cross, M.P., and the Pharmacy Act Amendment Bill.

At a meeting of the directors of the Scottish Chamber of Agriculture, held in Edinburgh last week, a letter was read from Mr. Cross, M.P., directing attention to the Pharmacy Act Amendment Bill now before Parliament, and asking the Chamber to petition the Board of Agriculture to have the law as to the sale of sheep-dips and other similar washes used by agriculturists amended so as to reduce the monopoly of pharmaceutical chemists in the sale of such articles. Mr. Cross urged free-trade in everything that was a necessity for the prosecution of agriculture, and he stated that under the present system the prices of such commodities were kept up to a oonsiderable extent. While the directors were of opinion that it would be better to deal with the subject in the Government Bill to be brought forward, they agreed to petition the Board of Agriculture in favour of Mr. Cross's amendments on the Pharmacy Bill.

Mysterious Chocolates.

Last week Mrs. Melville, wife of the harbour-master at Buckie, on the Moray Firth, died under mysterious circumstances. In the evening the postman delivered a parcel at Mr. Melville's house for Miss C. Melville, his daughter. It contained a fancy box of chocolates. In the belief that it had been sent her by a friend residing in Aberdeen, Miss Melville opened the box and invited her father and mother to partake of the sweets. This they did, Miss Melville also taking one. Very soon after Mrs. Melville complained of a burning sensation in her mouth. She became excited, and declared that she had been poisoned. An emetic was administered, which produced the desired effect, and medical aid was sent for; but Mrs. Melville died about an hour after she had taken the sweet. A *post-mortem* examination has been made, but the result has not been divulged. It is also said that, notwithstanding a close investigation, the police have been unable to discover who sent the box to the young lady. It bears the Buckie post-mark, but it is said that the kind of sweetmeat which the box contained is not sold in the town. Inside the box there was a slip of paper, with the following words written in pencil:—"To my sweet little Crisy. Eat the whole, speak not one word after, and you will dream of the sender." Miss Melville is 17 years of age.

Chemists' Wine-licences.

At the Glasgow Licensing Court on April 12, applications by Charles Cockburn, 56 St. Enoch Square, and by Mr. Macadam, of the Glasgow Apothecary Company, both carrying on business as chemists, were afterwards considered. These parties were granted grocers' licences at the last court, but on the understanding that only medicated wines would be sold. They wished to have this restriction removed. The Chief Constable stated that Mr. Cockburn had been reported to the Procurator-Fiscal for supplying a bottle of wine from his shop in Trongate where he had no licence. It was alleged that this wine was a quinine-wine for which no licence was required, and a sample had been sent to Somerset House for analysis. Mr. Sinclair explained that the wine was sent in error. Mr. Macadam afterwards appeared in person, and said that wines were never sold in gills over the counter. They were never sold in less quantities than bottles, and never on Sundays. The application was granted. Mr. Cockburn also appeared and made a similar statement as to the sale of wines. He was going to close on Sundays. His application was also granted.

French News.

(*From our Paris Correspondent.*)

The Annual Congress of French Learned Societies was opened last Tuesday afternoon in the Grand Amphitheatre of the Paris Sorbonne, with M. Alexandre Bertrand as President. After the usual inaugural speeches the members separated to carry out the work of the Congress in various sections.

Laboratory-accident.—An explosion took place a few days ago in the laboratory of M. Hubert, analytical chemist, at Béziers, while he was producing ozone by reacting sulphuric acid on permanganate of potash. The receptacle containing the preparation exploded, and M. Hubert had a hand injured. His left eye and a portion of his face were also severely damaged. His condition is very serious.

French Anti-cutting Scheme.—The final details having been satisfactorily terminated, July 1 is announced as the date on which the new arrangement for preventing, or rather minimising, the effects of cutting in France will come into operation. It will be remembered that the General Association of French Pharmacists has succeeded in inducing more than 5,000 pharmacists to sign an anti-cutting contract. They undertake not to sell below 10 per cent. reductions the patent medicines made by fifty-one French manufacturers, who in return agree not to supply their specialities to any pharmacist who has not joined the combination. The names of the fifty-one manufacturers have recently been published. There are a number of well-known firms amongst them; indeed, were it otherwise, there would be no hope for success. I notice that Mr. Swann, the English chemist of the rue Castiglione, Paris, is amongst them. Some of the most enterprising and successful firms, such as Chassaing & Cie., Champigny & Cie. (Maison Frère), and others, however, are not in the list.

Science is Well to the Fore in the Paris Municipal Council just now. The President, Dr. Navarre, is a physician in regular practice and in politics a militant Socialist. His wife is a near relation to a late English dentist, who amassed some wealth in Paris and spent it in pictures. The Vice-President of the Council is M. P. Astier, the owner of a prosperous pharmacy at 72 Avenue Kléber, Paris. Though of Socialistic tendencies, he seems readily disposed to place his untiring energies when needed at the service of Paris pharmacists. He appears, however, inclined to support the scheme for municipal pharmacies—that is, for each municipality to have a pharmacy of its own for supplying medicaments to the poorer classes at cost-price—and in this respect he is decidedly in antagonism with the majority of his pharmaceutical friends. But this did not prevent the Pharmacists' Syndicate of Paris and the Seine sending him a letter of congratulation on his elevation to the dignity of Vice-President of the Municipal Council. This brought from M. Astier a characteristic reply as follows: "Thanks for your congratulations. Our confrères need to defend themselves, but they ought to wake up a little. Cordially yours." Just at present M. Astier is taking an active part in a scheme for attracting foreign students to Paris. He complains that there has been a tendency lately to let them drift away from here on account of overcrowding, especially in the medical schools and laboratories. The indefatigable pharmacien hopes to get things arranged to his satisfaction before the Exhibition of 1900, and to have every effort used to attract the coming generation of foreign scientists to come and bask for a brief period in the sunshine of the *Quartier Latin.*

Colonial and Foreign News.

Saxlehner *v.* Apollinaris Company.—In an action tried at Buda Pest a year ago, between the above firms, the adoption of the title of "Uj Hunyadi" by the defendant company was condemned, and the local manager, Mr. Archibald Campbell, was condemned to a fine of 500cr. and 300fl. costs, or in default of payment 50 days' imprisonment. The High Court of Hungary has now annulled this judgment, and has ordered a new trial.

American Spirit-production.—*Apropos* of the article on alcohol-production in Europe, we observe that the French Consul at San Francisco gives the estimated production of spirits in the United States as 80 million gallons per annum. In some States the whisky is made from spirit distilled from barley and rye; in the State of Kentucky, however, which is the largest centre of production, it is manufactured from maize. California produces fruit-spirit from apples, peaches, and grapes.

South African Pharmacy.—Mr. Main, formerly manager of one of Messrs. P. J. Petersen & Co.'s establishments, has left Cape Town to take up a similar position with a firm of pharmacists on the Rand.—Messrs. J. Strachan & Co., of Salisbury, Mashonaland, have opened a new branch on the Causeway side of the town, adjoining their large mineral-water factory. It is a handsome double-windowed shop, fitted up in the latest style, and will compare favourably with any of the modern West-end London establishments. Mr. J. T. Dobie, late of Messrs. Goss & Co., Regent Street, London, is the firm's general manager.

Beat Dingley by a Short Neck.—The United States Treasury Department is wroth. William Isclin and A. Hirsch are importers in business somewhere under the Stars and Stripes, and on that great day upon which President McKinley signed the Dingley Tariff Bill, they rushed in some goods upon which the Customs Department wanted them to pay duty. "No," said they, "the Dingley tariff does not exist." This was at 4 p.m. on July 24, 1897, and while they argued the President signed the Bill—at seven minutes past four. They went to law about it, and the Judge decided in favour of the importers, but the Treasury are to appeal against the Judge's decision. Lots of other cases bear upon these two, which is the reason of the Treasury's obstinacy, but as the matter stands July 24, 1897, 4.07 p.m. is the time that the Dingley tariff came into force.

German Chemical Patents.—Some months ago we gave an abstract of a German patent for the production of codeine from morphine by interaction with nitrosomethylurethane. The process had, we understood, been experimentally tried in this country and not found to go well. The patentees, F. Bayer & Co.'s Successors, have apparently arrived at the same conclusion (*Phar. Zeit.* 256), for they have taken out a supplementary patent (No. 92,789) in which they provide for the use of diazomethane instead of nitrosomethylurethane, and work with it upon free morphine or upon morphine-potash.—The same company have also taken out a patent for the production of saccharin (No. 96,125). It resembles some processes which have recently been worked upon, and consists in converting the ortho-sulphobenzoic ester, $C_6H_4.COO.C_2H_5.SO_3H$, by means of phosphorus oxychloride, into the chloro-derivative, $C_6H_4.COO.C_2H_5.S_2OH$. This derivative is then acted upon with aqueous ammonia (compare *C. & D.*, January 1, page 6—Fahlberg and List use hydrochloric acid), whereupon NH_2 takes the place of the hydrogen in the last formula, and the removal of a hydroxyl group converts the product into saccharin.—Zimmer & Co., of Frankfurt, have patented a process for the production of vanillin-paraphenetidin (No. 96,342). It consists in heating a mixture of vanillin and paraphenetidin (in solution) to a high temperature, whereupon they combine, and by suitable treatment the product is obtained in prismatic crystals, which have a feeble odour of vanillin and melt at 102° C. It forms salts, the sulphate being in crystalline needles, m.p. 148–149° C. The product has been tried as a medicine, and is found to possess antipyretic qualities, but is also a styptic.

Pharmaceutical Society of Great Britain.

"FIRST" EXAMINATION.

The following are the questions given on Tuesday, April 12:—

LATIN.

(Time allowed—from 11 A.M. to 12.30 P.M.)

I. For all Candidates. Translate into Latin:—

1. You will receive great praise.
2. His wife and son have been found.
3. I hear that he sings.
4. The Athenians accused Timotheus of high treason.
5. If you are disgusted with such citizens, judges, show it.

II. Translate into English *either* A (Caesar) or B (Virgil).

(*Candidates must not attempt both authors.*)

A.—Caesar.

1. Is ita cum Caesare egit: Si pacem populus Romanus cum Helvetiis faceret, in eam partem ituros atque ibi futuros Helvetios, ubi eos Caesar constituisset atque esse voluisset; sin bello persequi perseveraret, reminisceretur et veteris incommodi populi Romani, et pristinae virtutis Helvetiorum. Quod improviso unum pagum adortus esset, quum hi, qui flumen transissent, suis auxilium ferre non possent, ne ob eam rem aut suae magnopere virtuti tribueret, aut ipsos despiceret: se ita a patribus majoribusque suis didicisse, ut magis virtute quam dolo contenderent, aut insidiis niterentur.

2. Id ne accideret, magno opere sibi praecavendum Caesar existimabat. Namque omnium rerum, quae ad bellum usui erant, summa erat in eo oppido facultas; idque natura loci sic muniebatur, ut magnam ad ducendum bellum daret facultatem, propterea quod flumen Alduasdubis ut circino circumductum paene totum oppidum cingit; reliquum spatium, quod est non amplius pedum sexcentorum, qua flumen intermittit, mons continet magna altitudine, ita ut radices montis ex utraque parte ripae fluminis contingant.

Grammatical Questions.

(For those only who take Caesar.)

1. Give the genitive singular and the gender of *pacem*, *eam*, *Helvetios*, *bello*, *qui*, *flumen*, *rem*, *ipsos*, *patribus* (Passage 1).
2. Give the first person singular of the indicative perfect, and the infinitive present, of all the verbs in Passage 2.
3. What verbs in Latin take a double accusative? Write *two* sentences in illustration.
4. What is meant by the "Sequence of Tenses"? Give, in Latin, *two* sentences in illustration.

B.—Virgil.

1. At puer Ascanius, cui nunc cognomen Iulo
Additur (Ilus erat, dum res stetit Ilia regno),
Triginta magnos volvendis mensibus orbes
Imperio explebit, regnumque ab sede Lavini
Transferet, et Longam multa vi muniet Albam.
Hic jam ter centum totos regnabitur annos
Gente sub Hectorea; donec regina sacerdos,
Marte gravis, geminam partu dabit Ilia prolem.

2. Namque videbat, uti bellantes Pergama circum
Hac fugerent Graii, premeret Trojana juventus;
Hac Phryges, instaret curru cristatus Achilles.
Nec procul hinc Rhesi niveis tentoria velis
Agnoscit lacrymans; primo quae prodita somno
Tydides multa vastabat caede cruentus;
Ardentesque avertit equos in castra, prius quam
Pabula gustassent Trojae, Xanthumque bibissent.
Parte alia fugiens amissis Troïlus armis,
Infelix puer, atque impar congressus Achilli,
Fertur equis, curruque haeret resupinus inani,
Lora tenens tamen: huic cervixque comaeque trahuntur
Per terram, et versa pulvis inscribitur hasta.

Grammatical Questions.

(For those only who take Virgil.)

1. Give the genitive singular and the gender of *juventus*, *curru*, *quae*, *somno*, *caede*, *parte*, *alia*, *lora*, *cervix* (Passage 2).
2. Give the first person singular of the indicative perfect, and the infinitive present, of all the verbs in Passage 1.
3. What verbs in Latin take a double accusative? Give *two* sentences in illustration.
4. What is meant by the "Sequence of Tenses"? Give, in Latin, *two* sentences in illustration.

ARITHMETIC.

(Time allowed—from 12.30 P.M. to 2 P.M.)

(*The working of these questions, as well as the answers, must be written out in full.*)

1. Reduce 174 cub. yd. 22 cub. ft. 580 cub. in. to cubic inches.
2. If 1 qr. 2 bus. 2 pk. of corn cost 1*l.* 1*s.* $10\frac{1}{2}d.$, how many pecks can be purchased for 42*l.* 14*s.* 2*d.*?
3. Express $1\frac{1}{3}$ of 7 guineas as a fraction of $1\frac{1}{6}$ of 7*l.* 14*s.* 7*d.*
4. Reduce $2{\cdot}\dot{6}$ of $\cdot 87708\dot{3}l.$ to the decimal of half-a-sovereign.
5. By selling goods for 11*s.* $4\frac{1}{2}d.$ I lose 5 per cent. What shall I gain or lose per cent. by selling them for 14*s.*?
6. I sold 1,000*l.* 4 per cent. Stock at 90*l.*, and with the proceeds bought a 3 per cent. Stock, gaining 10*l.* per annum in income by the transaction. At what price did I buy the 3 per cent. Stock?

The following question must be attempted by every candidate:—

7. Write out the Metric Table of Weights.
Express 471,685 grammes approximately in hundredweights, &c.

ENGLISH.

(Time allowed—from 3 P.M. to 4.30 P.M.)

1. Analyse:—

> "Within the girdle of these walls
> Are now confined two mighty monarchies,
> Whose high upreared and abutting fronts
> The perilous narrow ocean parts asunder."

2. Write out the subjunctive present of the verb *to be*, and the passive indicative future of the verb *to love*.
3. What are *primary derivative* adjectives? Form them from the following words:—*fill*, *pride*, *three*.
4. In the following passage supply the necessary capital letters, and put in the stops and the inverted commas where necessary:—this is sir charles vandrift the great diamond king marvillier said introducing us so i see the man answered then you know me charles asked i wouldnt be worth much the detective replied if i didnt know everybody and youre easy enough to know why everybody in the street knows you

The following question must be attempted by every candidate:—

5. Write a short composition on *one* of the following subjects:—
   (i.) The garden in early spring.
   (ii.) Free libraries.
   (iii.) English colonisation as compared with other systems.
   (iv.) "Example is better than precept."

COMMENTS BY "HEAD-MASTER."

Latin

is the subject which, we think, proves the stumbling-block to the majority of the candidates who are unfortunate enough to be plucked. Not a few apprentices enter upon their career without having previously passed the Preliminary examination; many, indeed, without having learnt even the rudiments of Latin. Some have got up their Latin without the help of a teacher—no light task, and one involving many weary hours of patient study. Such candidates would find their burden somewhat lighter if they were to provide themselves with the following text-books:—

First, they should certainly prepare themselves carefully from Dodd's "Complete Guide to the Preliminary Examination" (Office of The Chemist and Druggist, 42 Cannon Street, London. 2*s.*). For Latin sentences we know of no better text-book than Smith's "Latin Principia I." (John Murray, London. 3*s.* 6*d.*). There is a cheap "Key for Private Students," which may be had from the publishers, price 6*d.* Candidates need not work through all the sentences in each exercise—the first three and the last three would be quite sufficient.

For Caesar and Virgil, the private student, if he must have a key, should at least have a good one. That published by the U.C.C. (Clive & Co., London), price 1*s.*, is excellent.

Grammatical Questions.—We miss this time the stereotyped question on the numerals, but it is quite evident that every candidate should make a point of knowing the principal parts of all the verbs in his chosen author. A short catechism of Latin Syntax, consisting of about 20 pp., to be found in Allen's "Elementary Latin Grammar" (Clarendon Press), covers the ground almost completely.

ARITHMETIC.

Questions 1–3 (inclusive) are very easy, and require only careful working.

Question 4.—$87708\dot{3}$*l.*: avoid the error in method frequently found in simplifying such a decimal. It is much easier to write it $\frac{87708\frac{1}{3}}{100000}$. We then have—

$$\frac{2\frac{2}{3} \text{ of } \frac{87708\frac{1}{3}}{100000}}{\frac{1}{2}} = \frac{8 \cdot 263125 \times 2}{3 \cdot 3 \cdot 100000}$$

Question 5.—Find the cost-price = $\frac{20}{15}$ of 11*s.* 4½*d.*

The rest is plain sailing.

Question 6.—First income = 40*l.*
Second income = 50*l.*
Cash invested = 900*l.*

If 900*l.* makes 50*l.* income, what will make 3*l.* income ?

A simple proportion, the solution of which gives the price of the stock.

Question 7.—Taking a kilogramme = 2·205 lbs., approximately we have 471,685 grammes = 471·685 kilogrammes = 471·685 × 2·205 lbs., &c.

The arithmetic paper is, on the whole, easier than usual.

ENGLISH.

We give the sentences for the guidance of candidates :—

A. "Within the girdle of these walls are now confined two mighty monarchies." Principal sentence.

B. "Whose high upreared and abutting fronts the perilous narrow ocean parts asunder." Sub-adjectival clause.

The remaining questions should not be found difficult by the average candidate. In the "short composition" free libraries and English colonisation, as compared with other systems, have been set before, we think.

We should advise intending candidates, once they have covered the ground of the examination, to test themselves from time to time with old papers. They may be lucky enough to find some of the questions set over again.

EXAMINATIONS IN LONDON.

April, 1898.

MAJOR EXAMINATION.

Candidates examined 39
" failed 18
" passed 21

Barlow, Thomas Oldham
Black, William Reynolds
Blackmore, Frank
Burnett, John
Chapman, Edgar Marsh
Coley, James Wm. Ernest
Day, John Edwin
Evans, John Richard
Exelby, George Henry
Farrow, Tom
Happold, Carl
Henderson, Henry John
Hornby, Frederick William
Matthews, Harold Evan
Morgan, Harold Marston
Nelson, William Brown
Perrédès, Pierre Elie Félix
Priestman, William
Smith, Fredk. Alfred Upsher
Swinn, Charles Gosling
Todd, Arthur Higgs

EXAMINATIONS AT EDINBURGH.

At the quarterly examinations, which concluded on April 6, the following results were recorded :—

Major Examination.—Three candidates. Two failed ; the following passed :—

James Craigie Laird, Edinburgh

Minor Examination.—One hundred and forty-five candidates. One hundred and one failed ; the following 44 passed :—

Allan, William F., Airdrie
Armstrong, Hy. S., Edinburgh
Brayn, Percy H. G., Salop
Brunyee, Nathaniel, Edinburgh
Cheyne, Charles A., Edinburgh
Cole, Reginald, Edinburgh
Correy, Alexander, Glasgow
Crofts, John H., Edinburgh
Dow, William B., Edinburgh
Foreman, Albert E., Newcastle
Foster, Ernest U., Ediuburgh
France, Hugh A., Edinburgh
Grant, George Brown, Glasgow
Grant, Peter, Edinburgh
Hitchon, Peter, Southport
Hogg, George T., Horncastle
Holdsworth, Joseph, Bradford
Jelly, John W., Manchester
Jones, Henry R., Mauchester
Jones, Wm. L., Menai Bridge
Junor, Alexander R., Inverness
Kennedy, Robert, Johnstone
Love, John C. M., Edinburgh
McCallum, Robert, Glasgow
Mackenzie, Andw., Manchester
MeMaster, Peter, Glasgow
Manson, John, Glasgow
Metcalfe, Frank, Edinburgh
Morrison, John L., Edinbuigh
Muir, John, Edinburgh
Mushet, Robert, Kilmarnock
Potts, George H., Edinburgh
Robertson, C. B., Edinburgh
Ross, James Daniel, Edinburgh
Shirras, Alex. W., Edinburgh
Stokoe, John C., Edinburgh
Stubbs, William C., Edinburgh
Sutherland, John James, Leith
Taylor, Alfred F., Edinburgh
Turton, Herbert, Warrington
Watson, Edward A., Edinburgh
Wilkie, John M., Edinburgh
Williams, David T., Chester
Wilson, James Bell, Ayr

New Books.

Any book named in this list can be supplied post-free to any part of the world on receipt of the published price by the Publisher of The Chemist and Druggist, 42 *Cannon Street, London, E.C.*

Barlow, W. S. Lazarus. *A Manual of General Pathology for Students and Practitioners.* 8⅞ × 5⅜. Pp. 808. 21*s.* (Churchill.)

Dyer, B. *Fertilisers and Feeding-stuffs : Properties and Uses.* Text of Fertilisers and Feeding-stuffs Act, 1893 ; Regulations and Forms of the Board of Agriculture ; Notes on the Act by Alex. J. David, B.A. 3rd ed. rev. 7¼ × 4¾. Pp. 134. 1*s.* (Lockwood.)

Neumann, B. *The Theory and Practice of Electrolytic Methods of Analysis.* Trans. by John B. C. Kershaw. 7¾ × 5. Pp. 264. 10*s.* 6*d.* (Whittaker.)

Piek, Dr. S. *Die Künstliche Dungmittel* [artificial manures, a manual for manufacturers, land-valuers, sugar-manufacturers, &c.]. Illustrated. 8vo. 7½ × 5 in. Pp. viii + 245. 4fl. (Hartleben, Vienna.)

Seward, A. C. *Fossil Plants for Students of Botany and Geology.* Illus. Vol. 1. 9⅛ × 5¾. Pp. 470. 12*s.* (Camb. Univ. Press.)

Smith, E. A. *A Manual on Dental Metallurgy.* 7⅝ × 4⅞. Pp. 296. 6*s.* 6*d.* (Churchill)

Squibb, E. R., E. H., and C. F. *Ephermeris of Materia Medica, Pharmacy, Therapeutics, and Collateral Information.* Vol. V. No. 1. January, 1898. 5⅝ × 8⅞. (Brooklyn, N.Y.)

Taylor, R. W. *A Practical Treatise on the Sexual Disorders of the Male and Female.* 8vo. 12*s.* net. (Hirschfeld.)

Borax from U.S.A.—We learn that it is proposed to manufacture boracic acid in California at Daggett, a small town north of Los Angeles on the Santa Fe railway, where the crude material is readily obtainable. The Pacific Coast Borax Company are the movers in the matter.

United States Drawback on Spirits.—We note the decision by the United States Internal Revenue Bureau that the smallest quantity of liquor or preparations which may be entered for drawback on export, must not be less than 10 gal., and that this quantity must be contained in an original package.

Atropia for Morphia.—A Chemist's Fatal Error.—On March 5 Dr. Samuel Irvine Williams, L.R.C.P., went into the shop of Mr. James W. Christophers, Fitzroy, a suburb of Melbourne, and asked hurriedly for some sulphate of morphia. Mr. J. W. Christophers, jun. (a qualified chemist), was in the shop, and states that the light was failing at the time ; that he went to the safe where the poison was kept, and picked up a tube which he believed was labelled sulphate of morphia. These are 15-gr. tubes as imported, with label running round the tube. The tube containing sulphate of atropia was identical in appearance. Mr. Williams requested him to hurry up, and manifested other indications of impatience, so that Mr. Christophers poured out the powder and wrapped it up with more than ordinary haste. Mr. Williams apparently made it while in his buggy into a solution for hypodermic purposes, and seems to have injected one dose into his arm within a few minutes. He then went to attend to a patient, to whom he administered a dose, and also took the opportunity of injecting a second dose into his own system. On driving away serious symptoms manifested themselves, and he was taken by his wife, who was with him in the buggy, to the residence of another doctor, where he speedily became unconscious, and without recovering consciousness died on March 7. His patient, after suffering severely, recovered.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on April 6. Present:—Mr. R. J. Downes (President), Mr. Beggs (Vice-President), and Messrs. Grindley, Wells, Montgomery (Belfast), W. J. Baxter (Coleraine), Porter, J. J. Bernard, Conyngham, Kelly, Sullivan (Waterford), Hayes, Simpson, and Ryan.

THE ARGUING EXAMINER.

Letters were read from Mr. A. L. Doran, having reference to a diversity of opinion between him and the Council in relation to his functions as one of their examiners. It was decided that the President and some other members of the Council should have an interview with Mr. Doran on the subject.

ENFORCING THE PHARMACY ACT.

A letter from the District Inspector of the Royal Irish Constabulary at Aughnacloy referred to a case of Robert Galbraith, who had been fined 1*l.* with costs by the Magistrates there for having unlawfully sold laudanum on April 23, 1897. Subsequently, on a case stated, the decision of the Magistrates was reviewed by the Queen's Bench Division, and that Court had sent the case back to the Magistrates, with an order that the defendant should be fined the full penalty of 5*l.*, under section 30 of the Act of 1875, and should pay the costs of the appeal. This, the letter stated, had been done.

Mr. BERNARD: Has he appealed to the Lord Lieutenant yet?

The PRESIDENT: No; not that we have heard.

Mr. WELLS: But the Magistrates said if he did they would sign his memorial. They had an official copy of the Queen's Bench decision before them, and they gave their decision in the face of it.

Mr. BERNARD: Perhaps, if he appeals, the Lord Lieutenant will reverse the decision of the Queen's Bench for him.

Mr. WELLS: He could not do that. The Judges of the Queen's Bench said, in another case, that they did not know where the Lord Lieutenant got this power of reducing penalties.

The PRESIDENT: They were referring to a Revenue case.

A COMPANY PHARMACIST'S CONSCIENCE.

The PRESIDENT said that since he came into the room he received a letter from Mr. R. W. McKnight, of Belfast, in which the writer stated that he had been co-opted a member of the Council in opposition to a gentleman who was connected with a limited company, it being understood at the time that he (Mr. McKnight) had no connection with such companies. Since then he had joined a limited company, and therefore he thought it only fair to resign his seat on the Council now. If re-elected he would attend the meetings of the Council, and do his duty to the Pharmaceutical Society to the best of his ability. He (the President) did not think the Council could deal with Mr. McKnight's letter that day, but the vacancy that would be created by accepting Mr McKnight's resignation should be filled not later than that day two months.

The VICE-PRESIDENT said the usual course on such occasions was to ask the gentleman to reconsider his decision; but, having regard to the circumstances under which Mr. McKnight was co-opted, he did not think they could do so.

Mr. WELLS: Better hold the matter over and let it go on the agenda-paper for the next meeting of the Council.

An order was made accordingly.

DONATIONS

were received from the American Pharmaceutical Association of a copy of their "Proceedings for 1897," and from the Pharmacy Board of Victoria of a copy of their "Register for 1897." For these thanks were voted to the donors.

COMMITTEE-WORK.

Reports from the Law, House, School, Certificates, and Declarations Committees were disposed of.

THE SOCIETY'S SEAL.

The PRESIDENT pursuant to notice brought forward a motion with relation to the affixing of the Society's seal. The Bank of Ireland were not satisfied with the present mode of attestation of the seal. What he proposed was that in future the affixing of the seal to any document should be "attested by the signatures of the President and Vice-President, and in the absence of either of them by the mover of the resolution authorising the same, and countersigned by the Registrar."

Mr. WELLS said the existing system of attestation by the signatures of the President *or* Vice-President and of the Registrar had sufficed for twenty-three years, and had also been good enough for the Court of Queen's Bench. According to the regulation at present in force, the seal was kept in a box to which there were two different locks; the key of one of these locks was in the custody of the President *or* Vice-President, and that of the other in the custody of the Registrar. The three signatures proposed by the motion were not necessary.

The PRESIDENT did not press his motion.

NEW MEMBERS.

On the motion of Mr. Grindley, Hon. Treasurer, seconded by the Vice-President, the following gentlemen were elected members of the Society:—Messrs. John Burnett, Dublin; James A. Doyle, Belfast; and William S. Duggan, Rathmines (Dublin).

The following were nominated for membership:—Mr. Samuel Curham (Dublin) and Mr. Charles E. Price.

Mr. Richard Barry (Cork) was nominated for election as an associate-druggist.

The Council then adjourned.

PRELIMINARY EXAMINATION.

The following have passed:—(W. A. Murphy and G. A. C. Scott, equal), P. J. McFarlin, Miss A. E. Roberts (W. F. Cuttiford and H. Todd, equal), M. J. Quinn, P. V. Dolan, J. Sullivan, D. O'Leary (J. Bruce and J. Montgomery, equal), R. J. Eccles, H. E. Young, and P. D. Larkin. Thirteen candidates have been rejected.

At the Counter.

"ANTECAMERA tabloids, 5 gr.," were ordered in writing at a West-end pharmacy lately.

FROM A DEVONSHIRE CHEMIST.—"Silvet a zink,' "Balson and seed for coof," "Old de clone," "Captical plaster," "Salve of latile," "Seedles powers."

"CASELINSED."—This order, very badly written on absorbent paper, did not lend itself easily to the interpretation of Kay's linseed. It was sent to Mr. Slade, of Tenbury.

"WHAT can yer allow for this here leech, mister? We've made it sick." This, says Mr. Fred Reynolds, occurred in a Leeds pharmacy, and the sketch professes to depict the event.

Legal Reports.

PINK PILLS IN VICTORIA.

The Victorian Appeal Court gave judgment on March 9 in the case of Shillinglaw *v.* Taffs, which was a prosecution by the Pharmacy Board of Victoria of a grocer for the sale of pink pills, on the ground that these contained arsenic, and that the defendant was neither a registered pharmacist nor a registered medical practitioner. Mr. Blackett's evidence for the prosecution was to the effect that the pills contained a very small quantity of arsenic. He would not say that there was $\frac{1}{500}$ or $\frac{1}{1000}$ part. Mr. Craig, lecturer on chemistry, also analysed some of the pills, and said that he merely found a trace of arsenic. Mr. Dunn analysed ten pills, and found them to contain ·03 gr. of sulphide of arsenic. Evidence was called by the defence to show that a whole box might be taken without harm either by a child or an adult, and that the quantity of arsenic was so small that it ought not to be regarded as a poisonous mixture in any sense. The Magistrates dismissed the summons, and the complainant appealed. The appeal was heard on November 5 last. The Magistrates had dismissed the case on the ground that the medicine was a proprietary medicine, and therefore specially exempted from the operation of the Act by one of the sections of the Poisons Act. Against this decision the Pharmacy Board appealed, arguing that if it were a proprietary medicine, and exempt from the operation of the Act by the said section, then the conditions imposed in the same section by a proviso had not been observed. The section referred to is a compilation from similar exemption sections in the Arsenic Act, the Sale of Poisons Act of 1868, with some other provisions, and it reads as follows :—

> This Act shall not extend to the sale of any poison when made up or compounded as a medicine according to the prescription of a legally-qualified medical practitioner; or in the form of homœopathic medicine, unless in the crude state, mother tincture, or of a greater strength than the third decimal potency; nor to the sale of patent or proprietary medicines; nor to the sale of photographic materials for the purpose of photography; nor to the sale of medicines dispensed by veterinary surgeons for animals under their treatment; nor to the sale of fly-poison papers or packets of poisons mixtures, save and except poison seed for the destruction of vermin when duly marked as such; nor shall it extend to any sales by wholesale dealers in the ordinary course of wholesale dealing, if an order in writing signed by the purchaser shall be given for the supply of the same. Provided that all such sales shall be entered in a book, and that the bottle or other vessel, wrapper or cover, box or case, immediately containing the poison, be labelled as required by this Act.

The question for the Court was whether the proviso requiring the entry of sales and the labelling of wrappers applied to all the classes of sales mentioned in the section. The full Court thought it did not so extend, but applied only to the last class, which was introduced by fresh words of exclusion—"Nor shall it extend to any sales by wholesale dealers"—which was the only clause in which the word "sales" was used, and therefore dismissed the case with costs against the Board.

APOTHECARIES' QUALIFICATIONS.

At the Caston (Cambridgeshire) Petty Sessions on April 7, Mr. Herbert Kingsley Hunter, of Gamlingay, was prosecuted under the Medical Act by the General Medical Council for describing himself as a physician and surgeon without being entitled to use those designations. Mr. Hunter possesses the M.D. degree of Philadelphia, and is also a licentiate of the Society of Apothecaries. He had formerly styled himself M.D., but on being cautioned by the Medical Council he had ceased to use this title. At the same time he asked the Medical Council if he could not style himself "physician and surgeon," but they refused to advise him. He had since so described himself. For the prosecution, Mr. Muir Mackenzie referred to a case in which the High Court had held that a medical man named Smith, who was an L.S.A., was not entitled to describe himself as M.D. and physician and surgeon. Mr. Candy (for the defendant) contended that this case was not similar. His client did not use the M.D., and the words physician and surgeon only described the branches of practice which the diploma of the Apothecaries' Society expressly authorised. He drew a distinction between such a description and M.R.C.S., &c. The Magistrates imposed a fine of 5*l.*, but consented to state a case.

SALE OF FOOD AND DRUGS ACT.

Ground Cassia.

At Wolsingham (Durham) Police Court, on April 5, a case was heard in which ground cassia was alleged to contain, according to the county analyst's report, not less than 7 per cent. of extraneous mineral matter, of which 6·66 per cent. was "absolute sand." The accuracy of the certificate was admitted, but the defence claimed that the prosecution must prove wilful addition of the inorganic matter. The prosecution admitted they had no standard for the ground drug nor did they know under what conditions it was grown collected, and ground. The Magistrates dismissed the case

CHEMIST INFRINGES THE POISONED GRAIN ACT.

At Melton Mowbray Petty Sessions, on April 12, Robert Watson, chemist, Sheffield, and the occupier of a farm at Goadby Marwood, was summoned for placing grain, mixed with poison, calculated to destroy life, in a field at Goadby Marwood, on March 21. Defendant did not appear. Police-constable Stapleton stated that in consequence of information that a number of crows and pigeons had been found dead in a plantation on Mr. Watson's farm, he made inquiries, and, opening several birds, found they had eaten some wheat. He saw Mr. Watson, who admitted that he wanted some crows to "tie up," and, on the Saturday before he left Sheffield, having sold some poison to a farmer to dress wheat, he thought he might dress some himself, and on the Monday following he scattered it about the field at Goadby Marwood. Superintendent Mantle said it might have turned out a very serious matter, as several pigeons were found that were not quite dead, and one man was going to take some birds (including also a pheasant) and cook them. The poison was strychnine. It was stated on Mr. Watson's behalf that he was not aware he was infringing the law in any way. The Chairman said they regarded the case as a very serious one, but accepted the explanation given. The maximum penalty was 10*l.*, and he would have to pay 2*l.*, and costs, 14*s.* 6*d.*

Bankruptcy Reports.

Re Perrin Watson Wm. Bradshaw, now living at Maidstone, and formerly in business at 196 Norwood Road, London, Analytical Chemist.

The examination of this debtor, particulars of whose bankruptcy have already appeared, was resumed at the Maidstone Bankruptcy Court on April 6. Nothing fresh was elicited, and the debtor was allowed a sovereign out of the estate to get certain information the Official Receiver required, and the examination was again adjourned.

Re J. A. Griffiths, Torrington and Bideford, Chemist and Druggist.

The Official Receiver of the Taunton Bankruptcy Court has issued to the creditors in this failure a statement of accounts, showing that he is enabled to pay a supplementary dividend of 4¾*d.* in the pound.

Re Walter Stephenson, 48 Clarendon Street, Hull, formerly in partnership with Mr. Geo. Tweddle, and trading as Walter Stephenson & Co., Drysalters.

This debtor was examined at Hull Bankruptcy Court on April 6. He stated that his liabilities amounted to 571*l.* and his assets to 10*l.* He commenced business in January, 1891, in partnership with Mr. Geo. Tweddle, under the name of Walter Stephenson & Co., as oil-manufacturers and drysalters. Debtor borrowed 50*l.* to commence with, and during the first six months he borrowed further sums amounting to 250*l*. His partner brought in 294*l*., it being understood that at the dissolution Mr. Tweddle was to be repaid the whole of the capital he had put into the business. The partnership was dissolved, and debtor eventually sold the business to a Hull firm for 50*l*. After the sale of the business he lived on book-debts. The examination was closed.

Gazette.

PARTNERSHIPS DISSOLVED.

Kay, R. D., and **Spence, J.**, under the style of Kay & Co., Hyde, surgical rubber and novelty manufacturers.

Kyffin, T., and **Eve, H.**, under the style of Kyffin & Eve, Liverpool, veterinary surgeons and shoeing forge proprietors.

Pannett, J. W., and **Ballard, B.**, under the style of Pannett & Ballard, Minerva Street, Hackney Road, N.E., bottle-manufacturers.

Parsons-Smith, S., L.R.C.P., **Thompson, H. G.**, M.D., J.P., and **Newby, G. E.**, F.R.C.S., under the style of Drs. Parsons-Smith, Thompson & Newby, Addiscombe, Croydon, physicians and surgeon.

Red Cross Chemists Company (Joseph Newsom Choat, Arthur Frederick Williams, and Thomas Wardley), Abbey Parade, Herne Hill, and 4 York Road, Ilford. March 31. Debts by the Red Cross Chemists Company.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATIONS.

Burton, Ernest Herbert, and **Corke, Stuart Kingsley**, carrying on business as Burton & Co., Red Lion Square, W.C., photographic-mount makers.

Collier, Joseph Henry, Bulwell, Nottingham, assistant surgeon.

Thorp, Charles Glover, Nottingham, late Urmston, Oxford, Almondsbury, Gloucestershire, and Ely, physician and surgeon, late physician and surgeon, and prior to then qualified assistant.

The P.A.T.A. Executive.

THE nominations for the ten representatives of the retail section on the Executive Committee numbered twelve, but two of the previous members—Mr. James Cocks (Plymouth) and John Williams (Manchester)—decline re-election. These retirements make room for the two new candidates proposed—Mr. C. J. G. Bunker (135 Great Dover Street, London) and Mr. James Hessell (143 Highgate Road, London.). There will therefore be no contested election.

Reviews and Literary Notes.

MR. A. C. SEWARD, of Cambridge (an examiner to the Pharmaceutical Society), has just published the first volume of a book on fossil plants. There are numerous illustrations to the book, which runs to 300 pages. The work is to be completed in two volumes. Mr. Seward is, we understand, also engaged upon a British Museum catalogue of Jurassic plants and a monograph on British fossil cycads for the Palæontological Society.

MRS. HART, widow of the late Mr. Ernest Hart, is busy collecting correspondence and information bearing on the public work of her late husband, with a view to writing a biography.

"ONLY a good man can be a good doctor." This quotation from Professor Nothnagel is prefixed to a little book of twelve chapters, entitled "Doctor and Patient: Hints to Both." The author is Dr. Gersuny, of Vienna; the translator (who has done his work perfectly) is A. S. Levetus; Dr. D. J. Leech, of Manchester, writes a preface; and Messrs. John Wright & Co., of Bristol, publish the book at 2*s*. It is very pleasantly and somewhat racily written, and goes a little beyond the maxim we have quoted; for the kind of doctor which the Vienna authority sketches is not only a good man but a wise man. Dr. Gersuny points out many ways in which the learning of the school should be supplemented by the judgment and common sense of the cultivated gentleman. Largely the writer's reproofs are directed against the patients and their friends, who are a little too much disposed, in his opinion, to assist the doctor in the way of diagnosis and treatment, but the advice is always sensible and kindly given.

"THE MEDICAL REGISTER" for 1898 (6*s*.) and the "Dentists' Register" for 1898 (3*s*. 4*d*.) have been received from the office of the General Medical Council, and may be bought from Spottiswoode & Co., 54 Gracechurch Street. The "Medical Register" contains the names, addresses and registrable qualifications of 34,642 persons—an increase of 164 over the previous year. Ten years ago (1888) the number of registered medical practitioners was 27 939, and twenty years ago (1878) it was 22,600. That is to say, in the last decade the numbers have increased by 6,703, while in the previous ten years the increase was 5,339, a fairly substantial acceleration. From one of the tables published by the Registrar we find that Scotch qualification seems to be growing in favour. For while the total registrations from 1858 to the present year were from English, Scotch, and Irish qualifications (in the forty years) respectively 62·68, 21·84, and 15·48 per cent., they are now 58·22, 27·55, and 14·23 per cent.

THE "Dentists' Register" contains the names and addresses of 4,937 persons. Of these 843 hold Licentiateship of the R.C.S. England, 181 that of the R.C.S. Edinburgh, 139 that of the Faculty of Physicians and Surgeons of Glasgow, and 451 that of the R.C.S. Ireland. There are besides 34 persons who although possessing surgical qualifications were registered as having been in the *bonâ-fide* practice of dentistry before July 22, 1878, and 3,265—that is, two-thirds of all registered dentists—without any college qualification. The "foreign dentists" on the register are represented by 9 D.D.M.'s of the University of Harvard, and 15 D.D.S.'s of the University of Michigan.

THE book containing most information in a concise form including all the domesticated animals (says the *Farmer* of April 4 in reply to a correspondent) is "Veterinary Counter-practice," published by THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, but it has the disadvantage (being written for chemists) of having the prescriptions in Latin.

MR. W. BOSTOCK, chemist, of Ashton-under-Lyne, who occasionally contributes verses to this journal, has written a fifty-line poem on the Band of Hope Jubilee.

MR. WILLIAM ALLAN, pharmaceutical chemist, Dumfries, sends us a copy of the second edition of his "Handy Guide to Dumfries," a pleasantly-written and well-illustrated souvenir of that ancient and interesting town, which has just been issued for the coming season, price 3*d*.

MR. R. S. HICHENS has written a novel called "The Londoners," and he seems to have secured the goodwill of the reviewers. One of these tempted us to get it from a library, and we thought we had hit on a good thing when we found the first chapter entitled "Not Elliman." This is the way the chapter ends :—

> Mrs. Verulam flushed a lovely rose-colour. "His knowledge is wonderful," she cried. "He cured a calf which had the staggers with a preparation of his own—not Elliman." "Who is he?" "Some day I'll tell you; but it was not Elliman, and it was more effective." And she fell into a beautiful reverie—one of those strange and mysterious trains of thought so apt to be suggested by an embrocation.

We hired a clerk to read the rest of the novel, with instructions to watch for the formula of the embrocation which was more effective than Elliman, and which induced a mysterious train of thought, but nothing has come to light.

THE *Globe* is partly correct but somewhat belated in its discovery that "the same person who cannot procure from the chemist two pennyworth of laudanum to soothe an aching tooth, can buy without any formalities at all poisons enough to slaughter a regiment from the people who sell photographic apparatus. We have not the slightest intention of saying what these poisons are; but at least one of them is many degrees more powerful than the ordinary dilution of hydrocyanic acid."

The British Pharmacopœia, 1898.

BOUND IN CARDINAL CLOTH WITH RED EDGES, AND EXTENDING TO XXXII + 535 PAGES.

A General Review and Preliminary Criticism.

WE have to thank the General Medical Council for an advance copy of the British Pharmacopœia, 1898, which reached us on Thursday of last week, by which time (owing to Easter) THE CHEMIST AND DRUGGIST was on its postal way to subscribers in all parts of the globe. It is a pretty book, on the whole, and we shall go straight to the heart of it, because the articles which we published on January 8 and 15 last dealt with the general principles so well that anything in the nature of a long introduction now would savour of repetition. Therein, and previously in an article on the same subject in the 1897 Summer Number of THE CHEMIST AND DRUGGIST, the history of the Pharmacopœia, the arrangements made for the present revision, the men who have taken part in it, and what they have done, were dealt with. It was then predicted that the work would give satisfaction, and that opinion we may endorse generally with the completed book before us. We think that it will be even more valued by pharmacists than previous editions, and that medical men, who have been none too fond of the B.P. will find it useful to them in their practice. Before proceeding further we ought to say that the book will not be on the market for three weeks. The Registrar to the General Medical Council so informs us, but it is open for inspection at the offices of the Council in London and its branches in Dublin and Edinburgh daily, from 10 A.M. to 4 P.M.

Probably the first thing that wholesalers and retailers in pharmacy want to know about the new B.P. is:—

What has been made Obsolete?

The reply comes in rather a long list, which we cannot do better than give in full:—

*Acetum
*Acidum lacticum dilutum
*Acidum meconicum
*Aconiti folia
*Alcohol amylicum
*Ammonii nitras
*Anisi stellati fructus
Aqua
*Argentum purificatum
Aurantii fructus
*Beberinæ sulphas
*Belæ fructus
Bismuthi citras
*Bismuthi et ammonii citras
*Bismuthum
*Bismuthum purificatum
Calamina præparata
*Canellæ cortex
Carbo animalis
Carbo animalis purificatus
*Cataplasma carbonis
*Cataplasma conii
*Cataplasma fermenti
*Cataplasma lini
*Cataplasma sinapis
*Cataplasma sodæ chlorinatæ
*Cerevisiæ fermentum
*Cetraria
Charta epispastica
*Cinchonæ cortex (cinchonæ rubra cortex is retained)
*Cinchonidinæ sulphas
*Cinchoninæ sulphas
*Confectio opii
*Confectio rosæ caninæ
*Confectio scammonii
*Confectio terebinthinæ
Creta
*Cupri nitras
*Decoctum cetrariæ
Decoctum cinchonæ
*Decoctum hordei
*Decoctum papaveris
*Decoctum pareiræ
*Decoctum quercûs
Decoctum sarsæ
Decoctum sarsæ compositum
Decoctum scoparii
Decoctum taraxaci
*Ecballii fructus
*Elemi
*Emplastrum ferri
Emplastrum galbani
Emplastrum saponis fuscum
*Enema aloes
*Enema asafœtidæ
*Enema magnesii sulphatis
*Enema opii
*Enema terebinthinæ
Essentia anisi
Essentia menthæ piperitæ
*Extractum aconiti
Extractum aloes socotrinæ
*Extractum belæ liquidum
*Extractum calumbæ
Extractum colchici aceticum
Extractum conii
Extractum gelsemii alcoholicum
Extractum hæmatoxyli
*Extractum jaborandi
*Extractum lactucæ
*Extractum lupuli
Extractum mezerei æthereum
*Extractum papaveris
*Extractum pareiræ
*Extractum quassiæ
*Extractum rhamni frangulæ
*Extractum rhamni frangulæ liquidum
*Farina tritici
*Ferri peroxidum hydratum
Ferri sulphas granulata
*Glycerinum acidi gallici
Guttapercha
*Hordeum decorticatum
*Hydrargyri persulphas
*Infusum anthemidis
*Infusum catechu
*Infusum cusso
*Infusum jaborandi
*Infusum lini
*Infusum maticæ
Infusum valerianæ
*Kamala
*Lac
*Lactuca
*Laricis cortex
Liquor ammonii acetatis fortior
Liquor ammonii citratis fortior
*Liquor antimonii chloridi
*Liquor calcii chloridi
Liquor ferri acetatis fortior
Liquor ferri dialysatus
Liquor guttapercha
Liquor iodi
*Liquor lithiæ effervescens
*Liquor magnesii citratis
*Liquor morphinæ bimeconatis
*Liquor morphinæ sulphatis
*Liquor potassæ effervescens
*Liquor sodæ
*Liquor sodæ effervescens
Manna
*Marmor album
*Mastiche
*Maticæ folia
Mel
*Mica panis
*Mistura ferri aromatica
*Mistura scammonii
*Mori succus
*Morphinæ sulphas
*Mucilago amyli
*Nectandræ cortex
Oleatum hydrargyri
Oleatum zinci
*Oleo-resina cubebæ
Oleum myristicæ expressum
Oleum pini sylvestris
*Oleum rutæ
*Oleum sabinæ
*Os ustum
*Ovi albumen
*Ovi vitellus
*Physostigmina
Pilula conii composita
*Pilula ferri carbonatis
Pilula ferri iodidi
*Plumbi nitras
*Potassii cyanidum
*Potassii ferrocyanidum
*Quercûs cortex
*Rhamni frangulæ cortex
*Rosæ caninæ fructus
Rosæ centifoliæ petala
Sabadilla
*Sabinæ cacumina
*Santonica
Sodii nitras
*Sodii valerianas
Spiritus tenuior
*Suppositoria acidi carbolici cum sapone
*Suppositoria acidi tannici cum sapone
*Suppositoria hydrargyri
*Suppositoria morphinæ cum sapone
*Syrupus ferri subchloridi
Syrupus mori
Syrupus papaveris
*Tabaci folia
Theriaca
Tinctura aurantii (cort. sicc.)
Tinctura chloroformi composita
*Tinctura ergotæ
*Tinctura ferri acetatis
*Tinctura gallæ
*Tinctura laricis
Tinctura lobeliæ
*Tinctura sabinæ
Tinctura valerianæ
*Tinctura veratri viridis
Tinctura zingiberis fortior
*Trochisci opii
*Unguentum antimonii tartarati
*Unguentum calaminæ
*Unguentum elemi
*Unguentum potassæ sulphuratæ
*Unguentum sabinæ
Unguentum simplex
*Unguentum terebinthinæ
*Uvæ
*Vapor acidi hydrocyanic
*Vapor chlori
*Vapor coninæ
Vapor creasoti
*Vapor iodi
Vapor olei pini sylvestris
*Veratri viridis rhizoma
*Vinum aloes
Vinum opii
*Vinum rhei

The list is self-explanatory in regard to the majority of the articles named. The first thing that the Pharmaceutical Society's committee did when it began its work three years ago was to compile a list of substances and preparations which it was thought should be removed from the Pharmacopœia. The British Medical Council's Therapeutics Committee did the same. In the above list we have indicated by asterisks the articles included which were named in the pharmaceutical list, but the Society's committee named other eighty-two which the compilers of the Pharmacopœia have thought it wise to retain. There is sure to be much heartburning in regard to many of the deletions. This seems a particularly inappropriate time to take out cinchonidine, which is so much in demand and is so scarce that the price has been going up steadily of late, and cinchona-barks containing it are high in price on that account alone. It and cinchonine are much used in India, and we can only explain their deletion from the B.P. as being due to a lapse of Imperialism, or inability on the part of the B.P. Imperialists to live up to the high-pitched standard of enthusiasm they started out with. Bael is also a loss to India, where the half-ripe fruit is extensively and successfully employed for dysentery. Perhaps, this is one of the things that are to be included in the Indian and Colonial Addendum to the Pharmacopœia which is promised in the preface. Ext. aloes socotrinæ is a deletion which will grieve many, and, apart from sentiment, we question if there is a drug in the B.P. which is more necessary for exhibition in extract form than Socotrine aloes. Much of it that comes into the market, while being genuine aloes, is so mixed with extraneous insoluble matter that it is only fit to be made into extract. The deletion of ext. colchici acet. is perfectly inexplicable, as it is much more used than the plain extract. The retention of hemidesmus is noteworthy, and a tribute to the St. Bartholomew's school of physic. We are pleased that the Pharmacopœia compilers have not taken the Pharmaceutical Society's advice in regard to liq. ammonii acet. and liq. ammonii cit.—viz., to remove these and retain the stronger solutions. The Pharmacopœia does just the opposite. Some will be sorry to see dialysed iron go, but it has served its day—but nothing else, we fancy. The retention of sumbul and gall ointment are two other examples of opposition to pharmaceutical advice. Few deletions are more surprising than that of tr. zingib. fort.; perhaps the revisors have been moved by a fear that it may in public-analytical mind be confused with culinary essence of ginger; at all events, it has gone with soda-water and others of that ilk. On the whole the *index expurgatorius* is not unworthy of an end-of-the-century Pharmacopœia; and when the fact is borne in mind that many of the deleted articles in the list are still represented in the book by improved preparations, there is not much to grieve about. It may be well to note that honey and raisins are still used in B.P. preparations, although the official list says they have been omitted, and there are other articles in this category—*e.g.*, chalk, cevadilla, and squirting-cucumber. What is meant by "omission" in such cases is that these articles are not described in monographs.

New Articles and Preparations.

The next thing after the preface is a list entitled "Articles and Preparations included in the British Pharmacopœia of 1898, which were not in that of 1885 nor in the 'Additions' of 1890." There are eighty things in the list, but all of them are not new to the B.P. Araroba, aurantii cortex recens, benzol, and hydrargyri oleas have their homologues in the 1885 B.P. or its "Additions." In our January articles we indicated certain new classes of galenicals which are introduced—first, fluid extracts purposely officialised for dilution; second, "liquors" of the same character for making "infusions" and "decoctions"; and, third, a series of bases for lozenges. We are not now referring to articles and preparations which go by old names, many of which are substantially new; these will be dealt with in the next section. In this strictly novel lot some striking departures will be observed. Thus, indiarubber takes the place of guttapercha for making charta sinapis, the thyroid gland creeps in as a tribute to animal medicine, "hazeline" has its representative in "liquor hamamelidis," cascara cordial is recognised as a good thing, boroglyceride, a patented article, gets a show in glycer. acidi borici; there is an imitation of liquor carbonis detergens; and although a formula for Easton's syrup is given, the compound hypophosphite syrup has no fellow in the B.P. We can best show what is what of the new things by giving brief notes about them:—

Araroba.—In the 1885 edition the name "chrysarobinum" was erroneously given to "the medullary matter of the stem and branches of *Andira Araroba*," and the synonyms "araroba powder" and "Goa powder" were appended. The crude substance was meant, and is now correctly described as araroba, with the synonyms "Goa powder" and "crude chrysarobin." It is not the medullary matter but "a substance found in cavities in the trunk of *A. A.*" This therefore is not strictly a new article.

Aurantii Cortex Recens (bitter-orange peel) was not official in the last B.P., although it was there on the fruit for the tincture of fresh orange-peel. Aurantii fructus has gone.

Benzol, which was included among the chemical reagents of the 1885 edition, we now find in the text. It is required for the solution of indiarubber. It is described as containing 70 per cent. of benzene and 20 to 30 per cent. of toluene. Sp. gr. 0 880 to 0·888.

Bismuth Salicylate, now prescribed in some forms of diarrhœa, appears for the first time, and is required to yield, after volatilisation of salicylic acid, 62 to 64 per cent. of bismuth oxide. The actual yield from commercial samples varies considerably on both sides of this estimate, hence the need for the definite statement.

Caffeinæ Citras Effervescens is inserted, we presume, as a compliment to a popular preparation. The process given for its manufacture is substantially that for hitherto official granules, and involves the heating of the mixed ingredients to between 200° and 220° F., the granules being subsequently dried at a temperature not exceeding 130° F. While the Pharmacopœia does not profess to be a *vade mecum* for the manufacturing chemist, and leaves much to "careful manipulation" in utensils "of suitable form," we question if this will give as satisfactory an effervescent citrate of caffeine as the process described in THE CHEMISTS' AND DRUGGISTS' DIARY for 1897, page 274, and in the 1898 DIARY, page 493 (*b*). For granular preparations containing alkaloids and easily alterable substances the method of allowing the ingredients to stand separately in a damp atmosphere for twelve hours and then incorporating with the medicinal ingredient, subsequently drying in a current of hot air, or the alternative method of mixing the ingredients with rectified spirit and drying in the same way, may be found in practice to be preferable.

Caoutchouc (indiarubber) replaces guttapercha, and is described as the milk-juice of *Hevea brasiliensis*, and probably other species; known in commerce as Para rubber. It is used in the preparation of liquor caoutchouc.

Carbonis Bisulphidum is officialised. It is required clear, colourless, sp. gr. 1 268 to 1·269, with characteristic but not fetid odour. It is emphasised that it must be free of sulphur compounds other than CS_2, but no hint is given as to how it may be preserved odourless. There is no difficulty in obtaining or making carbon bisulphide of the B.P. description.

Cocaina, the pure alkaloid, is now official, in response, doubtless, to the demand for it in ophthalmic prescriptions, and for pharyngeal medication in solution with liquid vaseline in atomisers, as well as for the ointment now incorporated. The solubilities given are the same as those in "Squire."

Codeinæ Phosphas.—This is a welcome addition, and as the most soluble salt of this alkaloid it will probably most frequently appear in prescriptions for cough. The solubility is given as 1 in 4 of water. It is much less soluble in alcohol (90 per cent.).

EXTRACTA.

Extractum Belladonnæ Liquidum is a new preparation, and is to be used in making the alcoholic (solid) extract, the tincture, liniment, and plaster of belladonna. It is standardised to contain ¾ gr. of the alkaloids of the root in 110 minims (0·75 gramme in 100 c.c.). The process adopted is that of maceration and repercolation of four successive portions of the root, in No. 20 powder, with a mixture (for the first percolation) of 7 volumes of alcohol (90 per cent.) and 1 volume of distilled water. The alkaloidal yield of the strong percolate from the fourth portion is then determined by a process suggested by Cripps, after which a sufficiency of the alcoholic menstruum is added to bring the finished product to the required alkaloidal value. Heat is thus entirely avoided in the process.

Extractum Ipecacuanhæ Liquidum is a new preparation (Umney and Braithwaite's) to replace the acetic extract. It is to be used in making acetum ipecacuanhæ and the wine. To make the preparation ipecacuanha in No. 40 powder, 1 lb., is treated by percolation with 90-per-cent. alcohol until exhausted, the first 13½ oz. being reserved. The marc is then mixed with lime, in order to free fixed alkaloid, and the percolation with alcohol continued. The alcohol is recovered from the last two percolates, and the residual extract dissolved in the reserved percolate. The proportion of alkaloids in the resulting strong liquid extract is estimated by heating 20 c c. until alcohol is dissipated, precipitating extractive and colouring matters with lead subacetate, freeing the filtrate from lead by means of sulphuric acid, and separating the alkaloids with ammonia and chloroform. The preparation is then diluted with 90-per-cent. alcohol to a strength of 2 to 2¼ gr. of the alkaloids in 110 minims (2 to 2 25 grammes in 100 c c.).

Extractum Jaborandi Liquidum (1 in 1) is directed to be prepared by percolation of the leaves, in No. 20 powder, with alcohol (45 per cent). There is no assay method indicated.

Extractum Nucis Vomicæ Liquidum is new, and is prepared from the seed, in No. 20 powder, by percolation with alcohol (70 per cent.), expression, and evaporation. It is standardised to contain 1½ gr. of strychnine in 110 minims, or 1·5 gramme in 100 c.c. The Pharmacopœia authorities designate anything less than two by the plural number, thus "1½ grains." This is a complete reversal of previous B.P. orthography.

Extractum Opii Liquidum is directed to be made from the extract of opium, ¾ oz. with 16 oz. of water and 4 oz. of 90-per-cent. alcohol. It should contain ¾ gr. of morphine in 110 minims, and represents 16½ gr. of extract of opium (20-per-cent. morphine-content) in each fluid ounce.

Extractum Strophanthi is a new extract and a type of a new style of preparation, of which the new form of the extract of Calabar bean is another example. They are in powder, and milk sugar is used as a diluent on the same principle as in the "abstracts" of the U.S. Pharmacopœia of 1880, which were omitted from the edition of 1890. It remains to be seen whether what has proved a failure in American pharmacy will be a success with us. As already indicated in the critical article on the Pharmacopœia in our issue of January 8, it is clear that the compilers have done their best to get preparations of a kind to agree as far as possible in regard to the dose. Thus the extract of Calabar bean is reduced to one-fourth the strength of the extract of 1885, in order to bring the dose into line with that of the other potent extracts—¼ to 1 gr. The work is still in theory a prescription-book for doctors, and these little aids to the prescriber's memory are made with occasional disrespect of pharmaceutical principles Two ounces of the extract of strophanthus is made from 1 oz. of seed! The seeds, dried and in No. 30 powder, are percolated with ether (to remove the oil), then with 90-per-cent. alcohol. The latter percolate is evaporated down and concentrated until it begins to thicken, and the sugar of milk is then added to the required quantity. It is reduced to powder. Might as well have been made from the tincture.

Glycerinum Acidi Borici.—The formula for this is substantially the same as that given in the U.S.P. (see The Chemists' and Druggists' Diary for 1897, page 273) for a preparation supposed to resemble "Boroglyceride." It is made by heating glycerin, 9 oz. by weight, to a temperature not exceeding 302° F., and adding 6 oz. boric acid gradually, stirring constantly and, when all is dissolved, maintaining the temperature of the liquid, frequently stirring and breaking up the surface film until the compound has lost one-third of its weight, when the product is mixed with an equal weight of glycerin. This preparation should not be confounded with glycer. acidi borici (1 in 8), which has hitherto been used privately. "Glycerole borate," or "solution of glycerol borate," would probably be a more correct description of it than "glycerin of boric acid," since chemical combination takes place.

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Glycerinum Pepsini (note that the Latin for pepsin is now "pepsinum") is of the same strength as the corresponding preparation of the "National Formulary" (The Chemists' and Druggists' Diary, 1897, page 142). Each fluid drachm represents 5 gr. of pepsin.

Hydrargyri Oleas.—Precipitated mercuric oleate now takes the place of the familiar solution of mercuric oxide in oleic acid. It is to be a substance of unctuous consistence, and it is ordered to be formed by the interaction of mercuric chloride and hard soap. One ounce of the former is dissolved in 10 oz. of water; 1 fl. dr. of oleic acid is then triturated with 2 oz. of powdered hard soap, and the product dissolved in 11 oz. of water. The solutions are mixed, and the precipitated oleate subsequently washed until there is no reaction for chlorides. Then dried. It is not a true oleate, which it could easily have been if Beringer's process had been more rigidly followed.

Hyoscine Hydrobromide is given presumably on account of its extended use hypodermically as a hypnotic. The dose is given as $\frac{1}{200}$ to $\frac{1}{100}$ gr. and the solubility as 1 in 1 of water and 1 in 13 of alcohol (90 per cent.). "Scopolamine hydrobromide" is a synonym, and the alkaloid may be obtained from henbane-leaves, species of *Scopola*, &c., but no distinction is made between the optically active and inactive forms except the melting-point 193°-194° C., which is ideal and inconsistent with the melting-point of the aurochloride (198° C.).

Hyoscyamine Sulphate is said to be the sulphate of an alkaloid contained in hyoscyamus-leaves and possibly other solanaceous plants. Why "possibly"? Schmidt has obtained it from belladonna and stramonium, and Ladenburg from duboisia. Melting-point, 402·8° F. (206° C.) Dose, $\frac{1}{200}$ to $\frac{1}{100}$ gr. It is to be distinguished from atropine by the gold-chloride test.

Infusum Scoparii has been introduced in place of the decoction of broom, and is to be made with 2 oz. of broom-tops, dried and bruised, to 1 pint of boiling water, infused for fifteen minutes.

Kaolin. — Elutriated China clay is introduced as an ingredient of pil. phosphori, for which there is a new formula.

Lamellæ Homatropinæ.—Discs of homatropine made from gelatin, with some glycerin, weight gr. $\frac{1}{50}$ (1·3 milligramme) and containing gr. $\frac{1}{100}$ (0 65 milligramme) of the alkaloidal hydrobromide.

LIQUORES.

Liquor Calumbæ Concentratus.—This is the first of the new group already referred to. We are told in the preface that many experiments have been made to get preparations which resemble the "concentrated decoctions and infusions" of manufacturers, and nine *Liquores Concentrati* are the result. "The products of their dilution with water may be prescribed" (says the preface) "by practitioners in place of the corresponding official infusions." There are still three decoctions and twenty-two infusions in the Pharmacopœia, as well as one concentrated decoction. The liq. calumbæ conc. is made by macerating 10 oz. of calumba-root (No. 5 powder) in 10 oz. of water for twenty-four hours, pressing strongly, and repeating; then "heating the liquors for five minutes *to* 180° F." [We presume this means that the fluid is to be slowly heated until at the end of five minutes it stands at 180° F., but it may mean "heat for five minutes *at* 180° F."] When cold 4½ fl. oz. of 90-per-cent. alcohol is added, the mixture decanted or filtered, and made up to 1 pint with distilled water. How much water will be required depends upon the calumba and the press used; so the preparation will vary in strength and appearance with the maker. Calumba is one of the worst drugs on earth to treat by the maceration and pressure method; but there it is, and it is a pharmacopœial process!

Liquor Caoutchouc.—A solution of indiarubber 1 oz. in 20 oz. of a mixture of equal volumes of benzol and carbon bisulphide. Intended to replace liquor guttapercha in making Charata Sinapis.

Liquor Chiratæ Compositus.—Chiratæ in No. 40 powder, 10 oz., is macerated (three days) and percolated with 20-per-cent. alcohol to yield 1 pint of liquor. Five ounces of the menstruum is used to moisten the drug, which is then packed in the percolator. In three days percolation is commenced and continued with 2-oz. portions of menstruum at such intervals that it will take at least ten days to make.

Liquor Cuspariæ Concentratus.—This is made with No. 40 powder cusparia of the same strength and in the same manner as liq. chiratæ conc.

Liquor Æthyl Nitritis.—This is the spt. æther. nit. substitute suggested by Dunstan and Dymond—viz., a 3-per-cent. solution of ethyl nitrite in a mixture of absolute alcohol 95 and glycerin 5. The way to make the ethyl nitrite is stated in 2½ lines, but not clearly enough for working-purposes. We described the process in detail in our issue of January 29, page 184. Characters and tests are given. Thus the sp. gr. is 0·823 to 0·826, and 1 vol. of the liquor should yield 7·6 vols. of gas in the nitrometer.

Liquor Hamamelidis. — Fresh hamamelis-leaves are macerated in a little more than double their volume (50 oz. in 110 oz.) of a mixture of water 10 and 90-per-cent. alcohol 1 for twenty-four hours, and half of it distilled. Can only be made where hamamelis grows (North America), and there the twigs and leaves are used. The liquor is now largely imported.

Liquor Hydrogenii Peroxidi.—"Golding 'air-wosh" is *not* given as a synonym. Contains 9 to 11 volumes of hydrogen peroxide, as tested in a nitrometer with potassium permanganate and sulphuric acid. A dose is given—viz., ʒss. to ʒij.

Liquor Krameriæ Concentratus.—Same strength and made in the same way as liq. chirat. conc., but with No. 40 powder krameria-root.

Liquor Morphinæ Tartratis.—Four ounces contains 17½ gr. of tartrate, 1 oz. of 90-per-cent. alcohol, and the rest water.

Liquor Pancreatis.—Feed your pig, kill it, take out the pancreas, remove the fat, chop the gland, triturate 5 oz. of it with sand, and digest in a pint of 20-per-cent. alcohol for seven days. Filter.

Liquor Picis Carbonis.—The B.P.C. formula. See THE CHEMISTS' AND DRUGGISTS' DIARY, 1897, page 476.

Liquor Quassiæ Concentratus.—Like liq. chiratæ conc., made with quassia in No. 40 powder, 2 oz. to the pint.

Liquor Rhei Concentratus.—Ditto. Rhubarb in No. 5 powder, 10 oz. to the pint.

Liquor Sarsæ Compositus Concentratus.—This is the old dec. sarsæ co., B.P. 1885, but eight times stronger. The sarsaparilla (20 oz.) is infused in three successive 5 pints of water at 160° F. for an hour, the other ingredients boiled with water until exhausted, and the mixed liquors evaporated to 16 oz.; 4½ oz. of alcohol is added, and at the end of fourteen days the liquid is filtered. Dose, ʒij. to ℥j.

Liquor Senegæ Concentratus.—The menstruum for this is a mixture of 20-per-cent. alcohol 2 and 45-per-cent. alcohol 1. The drug should be in No. 20 powder, and the process is like that for the chiretta liquor.

Liquor Sennæ Concentratus.—Twenty ounces of the leaf, in No. 5 powder, is divided into three portions, which are put into percolators and treated with water by the repercolation process until 16 oz. of percolate is obtained. The liquid is heated to 180° F. for five minutes, cooled, and 2 oz. of 90-per-cent. alcohol and 2½ oz. of tincture of ginger added.

Liquor Serpentariæ Concentratus.—Like the chiretta liquor with serpentary No. 40 powder 1 in 2.

Liquor Thyroidei.—Each thyroid gland of the sheep is converted into 100 minims of solution, the menstruum used being glycerin (34 minims) and 0·5 per cent. phenol water.

The infusion for which there is most need of a "Liquor concentratus" is inf. gentian. co., and that we do not find in the Pharmacopœia. This fact, along with the startling *faux pas* in connection with Liq. calumbæ conc., seems to indicate that the compilers have not been over enthusiastic about this new class of galenicals.

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Lithii Citras Effervescens.—Contains 5 per cent. of lithium citrate, with sodium bicarbonate 58, tartaric acid 31, and citric acid 21. The directions for granulation leave everything to the experience and skill of the compounder, and show no improvement upon previous B.P. attempts. The loss of moisture in the process is 15 per cent.

Morphinæ Tartras.—White acicular crystals containing three molecules of water of crystallisation. Soluble in 11 parts of water. No melting-point is given.

Naphthol.—Beta-naphthol, white or nearly so. Soluble 1 in 1,000 of cold water, 1 in 70 of boiling water, and in less than 1 in 2 of 90-per-cent. alcohol. Melting-point 251·6° F. (122° C.) The principal test is the ferric-chloride one, which by not giving a violet coloration ensures absence of alpha-naphthol.

Oleum Pini.—The oil of *Pinus Pumilio* leaves The characters and tests are substantially J. C. Umney's—viz., sp. gr. 0·865 to 0·870, opt. rot. + 5° to + 10° (100 mm.), and not more than 10 per cent. should distil below 165° C. (329° F.)

Oleum Rosæ.—Otto of rose is introduced for scenting cold-cream. Sp. gr. 0·856 to 0·860 at 86° F. (30° C.), and m.p. 67° to 72° F.

Paraffinum Liquidum.—A water-white, odourless, and tasteless petroleum oil; sp. gr. 0·885 to 0·890. F. C. J. Bird's sodium-plumbate test for sulphur compounds is given (*C. & D.* li. p. 288).

Physostigminæ Sulphas.—This takes the place of the pure alkaloid, which is comparatively useless for dispensing, and has long been displaced in this country by the sulphate. The salicylate is a somewhat more stable salt, but is only sparingly soluble in water (1–150), whereas the sulphate is soluble in less than its own weight—an advantage which outweighs the slight disadvantage of its slow surface change to rubeserine. We note that the formula includes $x\ H_2O$—an unusual expression, but we believe right as compared with other pharmacopœial formulæ in which water of crystallisation is not mentioned. As a matter of fact, it is difficult and expensive to determine this factor, but we are under the impression that Petit tried it ten years ago, when he made sulphate in crystals weighing several grammes each.

Pilula Quininæ Sulphatis.—An official quinine-pill had become almost a necessity. This one combines 1 gr. of tartaric acid with 30 gr. of quinine sulphate, and is massed with glycerin 4 gr. and powdered tragacanth 1 gr.

Pix Carbonis Præparata.—Prepared coal-tar has not hitherto been defined, although it has been in use for the liquor picis carbonis of the B.P.C., now officialised. It is prepared by heating commercial coal-tar in a shallow vessel at 120° F. for an hour, stirring frequently.

Pruni Virginianæ Cortex, the wild-cherry bark of the U.S.P., is now adopted from the B.P.C. list. It is greatly used in America in pulmonary affections, on account of the palliative effect of the hydrocyanic acid which it generates with water. The description given corresponds somewhat to that given in the U.S.P. A syrup and a tincture of the bark are also made official.

Quillaiæ Cortex is also adopted from the B.P.C. Formulary, because it enters into the preparation of liquor picis carbonis. It is known as Panama wood in commerce, but the B.P. gives the synonym "Panama bark," which may be more correct, but sounds unfamiliar.

Quininæ Hydrochloridum Acidum is the most soluble salt of quinine, and is being prescribed a good deal in solution as well as in pills. It is included in the French Codex as the best form for the hypodermic injection of quinine, for which purpose it is doubtless intended in the B.P. It is described as a white crystalline powder, soluble in less than its own weight of water, yielding a somewhat acid liquid. Hesse has shown that the formula for the acid hydrochloride is correctly expressed as without water of crystallisation, but the B.P. gives it as $C_{20}H_{24}N_2O_2{\cdot}2HCl,3H_2O$.

* * * *

Salol, phenyl salicylate, will be regarded as a useful addition to the official materia medica. Its antiseptic and anti pyretic properties are largely taken advantage of in modern prescribing. It is described as prepared by the interaction of salicylic acid and phenol, or of their sodium salts, with phosphoryl chloride or carbonyl chloride. The solubility is given as 1 in 10 of cold alcohol (90-per-cent.), very soluble in boiling alcohol (90-per-cent.), also soluble in one-third part of ether and chloroform, and in fixed and volatile oils; almost insoluble in water. Melting-point, 107 6° to 109 4° F.

Spiritus Anisi.—As indicated in our forecast of January 8 of probable pharmacopœial changes, the essences are discarded, and most of the spirits will be found to have been increased in strength. This is a new spirit, and contains only half the proportion of oil of anise present in the essence of anise, B.P. 1885. To 1 fl. oz. of oil of anise enough 90-per-cent. alcohol is added to produce 10 fl. oz.

Strychninæ Hydrochloridum.—The recognition of a soluble salt of strychnine is essential in view of the extended use of the drug as a means of stimulation by hypodermic injection in cases of chloral and chloroform poisoning, as well as in therapeutics generally. The nitrate is more commonly used, but the hydrochloride (the hydrochlor*ates* are now all called hydrochlor*ides*) is more than twice as soluble. The B.P. gives the solubility of this salt as 1 in 35 of water. The solubility of the nitrate is 1 in 75—one in 80, according to the P.G. The salt now made official is the better choice.

Suppositoria Acidi Carbolici.—Phenol suppositories are to replace the carbolic-acid suppositories with a soap basis of the last edition. The old formula was never really used, and the new basis has doubtless been well tested before having been officially adopted. A welcome change will be found in the latitude given to the compounder in the matter of the quantity of base to be used. This will be especially evident by a comparison of the formula for tannic-acid suppositories as given in the last edition and in this:—

1885.	1898.
The 36 gr. of tannic acid is to be mixed with 44 gr. of theobroma oil and incorporated with the remaining 100 gr. of the oil, the resulting product to be poured into twelve moulds, each of the capacity of 15 gr.	The 36 gr. of tannic acid is to be triturated with a little of the oil and added to the remainder, which is to be a sufficient quantity to form with the medicament a mixture which will fill twelve suitable moulds, each capable of holding 15 gr. to 16 gr. (or about 1 gramme) of oil of theobroma.

The monographs are so worded that the pharmacist is at liberty to make the suppositories by the cold process if he chooses. Full particulars respecting the process are given in this year's Chemists' and Druggists' Diary.

Suppositoria Belladonnæ.—These are new, and are each to contain 3 gr. of the alcoholic extract of belladonna, equivalent to $\frac{1}{60}$ gr. (0 001 gramme) of the alkaloids of belladonna-root. Oil of theobroma basis.

SYRUPI.

Syrupus Aromaticus appears to have been devised to take the place of the B.P.C. elixir simplex. To make it 5 fl. oz. of tincture of orange is mixed with the same quantity of cinnamon-water, the mixture is cleared with a little powdered talc, filtered, and 10 fl. oz. of syrup added. It goes into the new aromatic syrup of cascara.

Syrupus Calcii Lactophosphatis.—The formula given is similar to the U.S.P. one. Two and a half ounces of precipitated chalk is dissolved in 6 fl. oz. of lactic acid diluted with four times its volume of distilled water; 4 fl. oz. of concentrated phosphoric acid is added to the solution, and when the precipitate at first formed is dissolved the solution is diluted with a little distilled water, 2½ oz. of "orange-flower water of commerce, undiluted," is added. Then filter, dissolve 70 oz. of sugar in the mixture without heat, strain, and make up with water to 5 pints of syrup.

Syrupus Cascaræ Aromaticus is practically the cascara elixir of the B.P.C. It is a mixture of liquid extract of cascara, 8 fl. oz.; tincture of orange, 2 fl. oz.; alcohol (90-per-cent.), 1 fl. oz.; cinnamon-water, 3 fl. oz.; and syrup, 6 fl. oz. Dose, ʒss to ʒij.

Syrupus Codeinæ.—This is a good form for the administration of codeine. The phosphate is ordered instead of the alkaloid, as in the B.P.C. syrup, as being more easily soluble. The strength is codeine phosphate, 40 gr.; water, ¼ fl. oz. [new expression, used to be 2 fl. dr.]; syrup, 19¾ fl. oz.

Syrupus Ferri Phosphatis cum Quinina et Strychnina.—The new B.P. Easton's syrup is to be made with 130 gr. of quinine sulphate in a pint, instead of 120 gr. of the phosphate, as in the B.P.C. formula for the same article. Otherwise the formula and process are the same (see The Chemists' and Druggists' Diary, 1897, page 483). It represents 1 gr. of anhydrous ferrous phosphate, $\frac{4}{5}$ gr. of quinine sulphate, and $\frac{1}{32}$ gr. of strychnine in each fluid drachm.

Syrupus Glucosi.—A mixture of 1 oz. of liquid glucose and 2 oz. of syrup—intended to be used in the massing of pills, instead of treacle, and takes the place of the latter in all old formulæ. It differs from the syrup of glucose generally used at the dispensing-counter in that the latter usually contains glycerin, which is, on the whole, an improvement. It will be noted that in this instance the liquids are to be weighed.

Syrupus Pruni Virginianæ.—The Conference formula is adopted here. It is practically the same as the process originally published in the U.S.P., except that glycerin is omitted from the menstruum used to percolate the bark. It is added at the end as a preservative. It would have been better to have advised a closed percolator, although the hydrocyanic content of the syrup must be an uncertain quantity at the best.

* * * *

Terebenum came into vogue a year or two before the appearance of the last B.P., and now, when it has somewhat gone out again, it finds a place in the new. The prefix, "pure," commonly insisted on in its early days to distinguish it from a commoner product of the same name, has now been dropped. It is required to be colourless and have an agreeable odour and aromatic terebinthinate taste. Not more than 15 per cent. should distil below 329° F., and it should leave only a slight viscid residue (absence of excess of resin). Unfortunately the whitest and pleasantest smelling samples of terebene are not always the purest in this respect.

Thyroideum Siccum.—This is the form for the administration of the thyroid gland in the dry state as originally recommended by Professor T. R. Fraser. The fresh and healthy glands are directed to be taken from the newly-killed sheep, finely minced, dried, powdered, all fat dissolved out by means of petroleum spirit, and the residue dried again. The dose is from 3 to 10 gr.

Tinctura Pruni Virginianæ.—This is practically the B.P.C. preparation. Four ounces of the bark in No. 20 powder is macerated with 7½ oz. of water for twenty-four hours; 90-per-cent. alcohol is then added to produce 1 pint of product, "by the maceration process," according to the new directions, the details being relegated to the Appendix (*vide infra*).

Tinctura Quillaiæ.—This is different from the B.P.C. preparation. It is 1 oz. of the bark, in No. 20 powder, percolated with a pint of 60-per-cent. alcohol. It is sometimes used instead of senega as an expectorant, and it enters into the new liquor picis carbonis.

TROCHISCI.

As we had anticipated, and have previously intimated, the revisors have made a complete change in the composition of the pharmacopœial lozenges. The descriptions of the bases and the instructions for their preparation are, like other general processes, now relegated to the Appendix. Space is thus economised and needless repetition avoided. The *fruit basis*, which now appears for the first time, was introduced about one hundred years ago by a well-known Southampton firm, and its popularity much extended about twenty-five years ago by the late Sir Morell Mackenzie. To make 500 lozenges with the fruit basis the requisite quantity of the medicament is mixed with 15½ oz. of powdered sugar and 300 gr. of powdered gum acacia. The mixture is then made into a paste with 1¼ oz. of acacia mucilage and 2 oz of the "black-currant paste of commerce" [we should like to know what that is] previously softened with boiling water. The mass is now divided, and the lozenges dried in a hot-air chamber at a moderate temperature. In the *rose basis* the moist ingredients for the same quantity of powders are 5 fl. dr. of mucilage acacia and "a sufficient quantity of the official rose-water." The *simple basis* is massed with $1\frac{1}{4}$ fl. oz of mucilage and q.s. of distilled water. The *tolu basis* is intended for lozenges to contain salts of alkaloids which are to be dissolved in 3 fl. dr. (for the quantities indicated above) of distilled water, and the solution mixed intimately with the sugar and gum. Any other drugs ordered are then to be incorporated, as well as 3 fl. dr. of tincture of tolu. The whole is then made into a mass with $1\frac{1}{4}$ fl. oz. of mucilage of acacia and a little water if necessary. The advantage of these bases will be that the prescriber may indicate a particular kind for any medicament he may wish compounded in lozenge form. The manufacture of lozenges, however, will likely remain as the art of the confectioner, and there are few that combine that with the art of dispensing.

Troschiscus Acidi Benzoici is a new lozenge made with the fruit basis and containing $\frac{1}{2}$ gr. of the acid. Note the "trochiscus": formerly it was "trochisci."

Troschiscus Sulphuris is the only other addition to the list. It is not made with one of the lozenge-bases, but by the process given in the Additions to the last B.P. Each contains 5 gr. of precipitated sulphur.

UNGENTA.

Unguentum Aquæ Rosæ was originated some time ago by a pharmacist called Galen, wherefore it has long been and still is known as Ceratum Galeni. To make it $1\frac{1}{2}$ oz. each of white beeswax and spermaceti are melted in 9 oz. o almond oil, and the mixture triturated in a warm mortar with 7 oz. of the B.P. rose-water. It is perfumed with 8 drops of otto of rose to the pound.

Unguentum Capsici.—"Chillie paste" is not a synonym. Bruised capsicum-fruit 120 gr. is digested on a water-bath for an hour with 60 gr. of spermaceti and 1 oz. of olive oil.

Unguentum Cocainæ.—The strength is 4 per cent. The cocaine is rubbed up with four times its weight of oleic acid, gently warmed until dissolved, and lard added as a basis. Alkaloid 1, acid 4, lard 20, are the proportions.

Unguentum Hydrargyri Oxidi Flavæ.—This is apparently intended to be used as Pagenstecher's ointment. The strength is different—1 to 49 of yellow soft paraffin. The original formula as given in The Chemists' and Druggists' Diary, 1897, page 486, was ʒss. or ʒj. in an ounce.

Unguentum Paraffini.—When paraffin was introduced into the last B.P. there was considerable discussion over the question of the melting-points of the hard and soft paraffins, and it was generally stated that the soft paraffin is too soft. There is now more restricted latitude in respect to both, as the following figures of the melting-points show:—

		1885	1898
Hard paraffin	...	110° to 145° F.	130° to 135° F.
Soft paraffin	...	95° to 105° F.	96° to 102° F.

The necessity for uniformity in consistency has therefore been met by creating this unguentum paraffini (which is no longer a synonym for soft paraffin, and which, indeed, has no synonym at all), but consists of 3 oz. of hard and 7 oz of soft paraffin melted together and triturated constantly till cold. It is to be the basis of several of the pharmacopœial ointments, and it is stated that for white ointments it should be prepared with the white variety of soft paraffin, otherwise the yellow is to be used, and latitude is given to modify the proportions "to meet the exigencies of climate and prevailing temperature," and variations in melting-points.

Changes in Composition and Strength.

"Changes are lightsome, and fools are fond of them" is an old adage which may or may not be known to Pharmacopœia compilers, but they have had the spirit of it before them all the time. There is on page xxviii a list of "Articles and preparations . . . the composition of which has been altered," and to which there is the parenthetical addition, "Some minor alterations are not included." Alterations of strengths are included in another table, pages xxix–xxx. The intelligent presentation of all changes is best secured by treating the whole of them together. It is advisable to have the 1885 B.P. and The Chemists' and Druggists' Diary for 1897 alongside one when reading the following and the preceding paragraphs.

Acetum Cantharidis.—The menstruum to be used is a mixture of equal volumes of glacial acetic acid and water.

Acetum Ipecacuanhæ.—A mixture of liquid extract 1, 90-per-cent. alcohol 2, and dilute acetic acid 17. Filtered.

Acidum Hydrobromicum Dilutum.—Still 10 per cent. of HBr, but "may be obtained by the distillation of potassium bromide with concentrated phosphoric acid"—which is not at all a happy way of putting it, but gives text-book writers and chemical-manufacturers a chance.

Acidum Hydrochloricum Dilutum.—Six fl. oz. or 3,063 gr. (increase of 3 gr.) to make the pint.

Acidum Sulphuricum Aromaticum.—The synonym is "Elixir of vitriol." In consequence of the omission of tr. zingib. fort. and the increased strength of spt. cinnamomi the formula is altered thus:—Tincture of ginger, 10 fl. oz.; spirit of cinnamon, $\frac{1}{2}$ fl. oz.; 90-per-cent. alcohol, $29\frac{1}{2}$ fl. oz.; and sulphuric acid, 3 fl. oz. Although the formula provides exactly the same acid strength as the 1885 preparation the characters and tests suggest that it contains more—viz, 13·8 grammes in 100 grammes, instead of "12·5 per cent. of real acid." This is a good example of the more precise diction which is observable throughout the book, but it is peculiar that vagueness rather than precision is the rule in definitions of chemical processes.

Acidum Sulphuricum Dilutum.—Slightly weaker—viz., 1 fl. oz., $5\frac{1}{4}$ fl. dr., or 1,333 gr. (instead of 1,350 gr.) to the pint. Yet the sp. gr. and acid percentage remain the same. How have they managed it?

Adeps Benzoatus.—Now 210 gr. of powdered benzoin to the pound of lard.

AQUÆ.

Aqua.—No definition is given except under aqua anethi, &c., where it is said that "good natural potable water must be employed." When we say "water" in these notes we mean distilled water.

Aqua Camphoræ.—Seventy grains of camphor is dissolved in sufficient 90-per-cent. alcohol to make $\frac{1}{2}$ fl. oz., and water added to 1 gal.

Aqua Chloroformi.—Now half strength of the 1885 aqua.

Aqua Cinnamomi.—Instead of 20 oz. of bark 1 lb. is used.

Aqua Menthæ Piperitæ is made 77 minims to 1 gal. aq. menth. viridis the same.

Aqua Pimentæ.—Eight instead of 14 oz. of pimento to the gallon.

Aqua Rosæ.—"Rose-water of commerce" (aq. rosæ flor. trip.) diluted with twice its volume of water as required. A note says "the rose-water of commerce is a saturated solution of the essential oil of the rose-flowers." It would have been more correct to say "a saturated solution of the volatile principles." We hope the note may not lead anyone to suppose that they may make aqua rosæ by saturating water with otto of rose, then diluting it.

* * * *

Argenti Nitras Induratus.—A toughened caustic made by fusing 19 parts of silver nitrate and 1 part of potassium nitrate. A new preparation.

Charta Sinapis.—Equal parts of black and white mustard-seeds are bruised and freed from fixed oil by percolation with benzol. Of the dried powder 75 gr. is mixed with 5 fl. dr. of indiarubber solution and spread on 30 square inches of cartridge paper. The '85 mustard-paper was made with the oil-containing mustard and guttapercha solution, but the spreading strength was not limited as now.

Chrysarobinum.—Araroba is extracted with chloroform, the liquid evaporated to dryness, and the residue powdered.

Collodium Vesicans.—Made with ½ oz. of pyroxylin to 1 pint of blistering-liquid.

Confectio Sulphuris.—Instead of syrup of orange-peel 4 fl. oz., there is used syrup 2 fl. oz., tincture of orange ½ fl. oz., and glycerine 1½ fl. oz.

Decoctum Aloes Compositum.—Extract of Barbados aloes takes the place of the Socotrine.

Decoctum Granati Radicis.—Now made 4 oz. No. 10 powder to 1 pint.

Decoctum Hæmatoxyli.—Cinnamon bark 70 gr. instead of 55 gr.

Emplastrum Belladonnæ.—The ingredients are liquid extract of belladonna 4 fl. oz. (evaporated to 1 fl. oz.) and resin-plaster 5 oz. It contains 0·5 per cent. of belladonna alkaloids.

Emplastrum Calefaciens.—Expressed oil of nutmeg is omitted.

Emplastrum Cantharidis.—Suet is omitted, soap-plaster taking its place, and the other ingredients are readjusted as follows:—Cantharides 3½, yellow beeswax 2, lard 2, resin 2, soap-plaster ½.

Emplastrum Menthol.—The ingredients are readjusted in quantity in response to criticism. They are:—Menthol 1½, yellow beeswax 1, resin 7½. Temperature of mixing in the menthol, 160° to 170° F.

Emplastrum Picis.—Expressed oil of nutmeg is omitted.

Emplastrum Resinæ.—Hard soap takes the place of curd soap. So also in *Emplastrum saponis.*

EXTRACTA.

Extractum Aloes Barbadensis.—The temperature of evaporation is fixed at 140° F., an important and desirable concession to experience.

Extractum Belladonnæ Alcoholicum.—Made from the liquid extract, 20 oz., by evaporation and addition of sufficient milk-sugar to make the product 15 oz. Contains 1 per cent. of alkaloids, or a third less than in the 1885 alcoholic extract.

Extractum Cannabis Indicæ.—Now made by percolation.

Extractum Cascaræ Sagradæ.—The 1885 extract was hydro-alcoholic. The new one is made by exhausting the drug by percolation with water, and evaporation of the liquors to dryness. The 1885 one was evaporated to "a suitable consistence," which might, of course, be pilular or hard according to the fancy of the pharmacist.

Extractum Cascaræ Sagradæ Liquidum.—This is a 1-in-1 preparation made by a modification of Mr. John Moss's process. The drug is exhausted by percolation with water, the liquor is evaporated to 12 fl. oz. (when 20 oz. of drug is used), and a mixture of 4 oz. each 90-per-cent. alcohol and water added to produce 1 pint. It would have been better to have ordered the evaporated liquid to be decanted from deposit before adding the spirit.

Extractum Cocæ Liquidum is to be made with 60-per-cent. alcohol in the same manner as in the 1885 B.P.

Extractum Colocynthidis Compositum.—Alcohol 60 per cent. is used instead of proof spirit, and curd soap in shavings, not powder.

Extractum Ergotæ.—*Synonym*, Ergotin. Ergot, in No. 40 powder, is percolated to exhaustion with 60-per-cent. alcohol, and the percolate evaporated to one-fourth (5 fl. oz.) of the ergot taken (20 oz.), and mixed with its own volume of water. After filtering, when cold, 7½ fl. dr. of acid. hydrochlor. dil. is added; at the end of twenty-four hours the mixture is filtered, neutralised with sodium carbonate (175 gr.), and evaporated to a soft extract.

Extractum Euonymi Siccum.—The method differs from that in the 1890 "Additions" by the substitution of calcium phosphate for milk sugar, and it is notable that there is neither footnote nor synonym to say it is "Euonymin." The bark, in No. 20 powder, is exhausted by percolation with 45-per-cent. alcohol, the percolate evaporated to dryness, powdered, mixed with a fourth of its weight of calcium phosphate, and finished off.

Extractum Gentianæ.—Under this we note that it is "the consistence of a soft extract." The same expression occurs in other monographs, but we have not come across a definition of the consistency of "Soft Extract."

Extractum Glycyrrhizæ Liquidum.—The aqueous liquors are evaporated to sp. gr. 1·200 (1·160 in the 1885 B.P.), then a fourth (a sixth in 1885) of its volume of 90-per-cent. alcohol added.

Extractum Hamamelidis Liquidum.—Made in the 1890 way, but with 45-per-cent. alcohol.

Extractum Hydrastis Liquidum.—Same change as in the previous item. *Ext. Jaborandi Liq.*, ditto.

Extractum Nucis Vomicæ.—Ten ounces of fluid extract is evaporated to a degree experimentally determined previously, and milk sugar added to 3 oz. The powdered product contains 5 per cent. of strychnine, or about two-thirds the strength of the 1885 extract.

Extractum Opii.—Contains 20 per cent. of morphine. It is permitted to strike the average by mixing stronger and weaker extracts, or adding water or milk sugar to the stronger sample.

Extractum Opii Liquidum.—Now ¾ oz. of extract to the pint, or between 0·7 and 0·8 per cent. of morphine (instead of 1 per cent.). The introduction of fermentable matter into these preparations is objectionable. Do they keep?

Extractum Pareiræ Liquidum.—A new formula was necessary because the solid extract is omitted. The compilers have taken an astonishing procedure in consequence, for instead of determining once for all how much solid extract pareira yields, they direct each operator to determine, each time he makes the preparation, how much extractive there is in the watery percolate, whereupon the percolate is evaporated to three times the weight of the extractive in it, and each three volumes of the residue are made up to four volumes with 90-per-cent. alcohol. The preparation is better than the old one, but the method savours strongly of the armchair, and is not clever by any means.

Extractum Physostigmatis.—This is reduced to a fourth of the strength of the old extract by mixing with milk sugar. The menstruum is 90-per-cent. alcohol, which is a mistake, because it does not exhaust the bean, and gives a low yield of extract. A 70-per-cent. menstruum gives twice as much extract of two-thirds the strength of the 90-per-cent. alcohol extract, so that less milk sugar is required to give more of a product of the strength desired.

Extractum Rhei.—Made with No. 20 powder and 60-per-cent. alcohol by percolation and evaporation.

Extractum Sarsæ Liquidum.—The synonym "liquor sarsæ" is dropped. The preparation is made by repercolation (20 oz. of No. 40 powder in three portions) with 20-per-cent. alcohol until 18 fl. oz. of percolate is obtained, then adding 2 fl. oz. of glycerine. More economical than the old process, and a better preparation.

Extractum Stramonii.—The seed, containing the oil, in No. 40 powder, is exhausted by percolation with 70-per-cent. alcohol, and evaporated to "the consistence of a firm extract"—another new term.

Extractum Taraxaci Liquidum.—Sixty-per-cent. alcohol is used instead of proof spirit.

* * * *

Ferrum Tartaratum.—The quantities are altered—viz., liq. fer. persulph., 10 fl. oz.; liq. ammon., 16 fl. oz.; potas. acid. tart., 3 oz. 146 gr. Procedure the same.

GLYCERINA.

Glycerina Acidi Carbolici and Acidi Tanici are made with glycerin to produce 5 fl. oz. and *both* without heat. Good. It will be seen that the final "e" in glycerine is dropped.

Glycerinum Aluminis.—Same strength (1 in 6), but 3 fl. dr. of water is added.

Glycerinum Amyli.—Same strength as before, but glycerin 6½ and water 1½.

Glycerinum Boracis.—Water omitted. One in six of glycerin without heat.

Glycerinum Tragacanthæ.—Improved. Tragacanth 1, glycerin 3, water 1.

INFUSA.

Pint quantities are prescribed, and there are slight alterations in the proportions of ingredients, which we briefly note in the following paragraphs, wherein the quantities stated are for the pint:—

Inf. Aurant. Co.—Orange-peel, ½ oz.; lemon-peel, ¼ oz.; cloves, 55 gr.

Inf. Digitalis.—No. 20 powder of the leaves 60 gr.

Inf. Ergotæ.—Crushed ergot 1 oz. Infuse fifteen minutes. Double the old strength.

Inf. Gent. Co.—Gentian and orange-peel, of each ¼ oz.; lemon-peel, ½ oz. Infuse fifteen minutes.

Inf. Quassiæ.—Stronger. Finely-rasped quassia 88 gr. Infuse fifteen minutes.

Inf. Rhei—Stronger. Rhubarb 1 oz. Infuse fifteen minutes.

Inf. Senegæ.—No change in strength, but No. 10 powder prescribed.

Inf. Sennæ.—Senna, 2 oz.; ginger, 55 gr. Infuse fifteen minutes.

Inf. Serpentariæ.—Stronger. No. 10 powder of the drug, 1 oz. Infuse fifteen minutes.

It will be observed that the period of infusion has in several cases been shortened, following the precedent of the 1885 Pharmacopœia, and the more recent recommendations of William Martindale. In several instances the active ingredient has been increased in quantity to compensate for the briefer extraction, but there is no fixed rule in the matter, and the following are infusions whose period of maceration is also decreased to fifteen minutes, but no alteration is made in the proportion of active ingredient:—Buchu, caryoph., cascarillæ, chiratæ, cuspariæ, krameriæ, lupuli, rosæ, uvæ ursi.

* * * *

Injectio Apomorphinæ Hypodermica.—Now made on aseptic principles, the water being boiled a few minutes and cooled immediately before the hydrochloride is dissolved in it. The strength is 1 gr. in 22 minims, inclusive of 1 minim dilute hydrochloric acid, added to prevent the injection turning green.

Injectio Ergotæ Hypodermica.—Extract of ergot 100 gr. and phenol 3 gr. are dissolved in enough sterilised water to make 330 minims of injection. Camphor water before, and no phenol.

Injectio Morphinæ Hypodermica.—Now made with morphine tartrate 50 gr., in sufficient sterilised water to make 1,100 minims. Half the strength of the 1885 injection, and a good formula. The old one was wretched.

LINIMENTA.

Linimentum Ammoniæ.—One ounce of almond oil replaces as much olive oil in the old formula. Gives a thinner product, presumably.

Linimentum Belladonnæ.—Made with liquid extract 10 fl. oz., camphor 1 oz., water 2 fl. oz., and 90-per-cent. alcohol to 1 pint.

Linimentum Camphoræ.—The synonym for this is "camphorated oil."

Linimentum Hydrargyri.—A new formula is given. Mix liq. ammon. fort. 160 minims with camphorated oil to 1 fl. oz. Separately mix mercurial ointment 1 oz. with camphorated oil to 1½ fl. oz. Mix the two liquids.

Linimentum Iodi is now called *Liquor iodi fortis*, and is again changed in composition, the glycerin introduced in 1885 instead of camphor being now replaced by water. The formula is:—Iodine, 1¼; potassium iodide, ¾; water, 1¼. Dissolve, and add 90-per-cent. alcohol 9.

Linimentum Saponis.—At last! Soft soap 2 oz. takes the place of as much hard soap in the old formula. This is an improvement which many pharmacists have long adopted *sub rosa*.

Linimentum Sinapis.—Extract of mezereon is omitted, and the volatile oil of mustard increased to 1½ fl. dr.

Linimentum Terebinthinæ.—Improved. Soft soap 1½ oz. is mixed with 2 oz. of water. Camphor 1 oz. is dissolved in oil of turpentine 13 oz., and this is gradually added to the soap. When mixed, water is added to make the whole 1 pint.

LIQUORES.

The project for the creation of an International Pharmacopœia has had more effect upon the British Pharmacopœia than any other. Unlike our continental contemporaries in pharmacy, who took the project seriously and did little or nothing to apply the idea of international uniformity to their individual standards, we Britishers could not work up enthusiasm about the project, but did our best to adapt our standards to those of our neighbours. They are in the habit of making alkaloidal and similar solutions 1 per cent., while we like them 4 gr. to 1 oz., or 1 gr. in 120 minims. In order to come nearer the continental idea, the compilers of the 1885 B.P. altered the principle of percentage by making the strengths "about 1 in 100," and so on, the "100" meaning fluid grains or parts. A storm of criticism immediately arose; the change was a shock to tradition, it was not carried out with scientific accuracy, and the introduction of the "fluid grain," for trading-purposes a non-legalised measure and one mentally inconvertible into the thinking-unit—the minim, was a questionable improvement. At all events, few of the 1885 changes were so heartily assailed as this one, and by none more persistently and practically than Colin A. Macpherson, who accepted the official challenge, and constructed formulæ providing for liquors which would represent 1 part in 100 fluid parts absolutely. In a monograph on the subject which appeared in The Chemists' and Druggists' Diary, 1886, a useful table of comparison was included, which we now reproduce and bring up to date, so as to show those whose memories do not go so far back what we have come to through criticism and experience:—

Liquor	1867		1885		1898	
	One Grain of Active Ingredient in					
	Fl. gr.	Min.	Fl. gr.	Min.	1 grm. in c.c.	Min.
Arsenicalis	109·4	120	100·5	110·3	100	110
Arsenici hydrochlor....	109·4	120	100·5	110·3	100	110
Atropinæ sulphatis ...	109·4	120	97·2	106·6	100	110
Morphin. acetatis ...	109·4	120	97·2	106·6	100	110
Morphin. hydrochlor.	109·4	120	97·2	106·6	100	110
Potassii permang. ...	109·4	120	98·2	109·2	100	110
Sodii arsenatis ...	109·4	120	97·2	106·6	100	110
Strychninæ hydrochlor.	109·4	120	97·2	106·6	100	110

Thus we get back to uniformity once more, and are not bothered by the "fluid grain," that pseudo-scientific bugbear which only impedes the adoption of metric terms.

There are other percentage-solutions in the B.P. besides the above, and they have all been brought into strict conformity with round numbers in minims and cubic centimetres. We now proceed to note the changes which have been made in this section.

Liquor Ammonii Acetatis.—The strong solution is omitted, and the compilers have adopted Mr. B. S. Proctor's suggestion to neutralise the ammonium carbonate with the acetic acid, instead of *vice versa*. One ounce of the carbonate is dissolved in 10 oz. of water, the solution neutralised with acetic acid, and water added to 1 pint. Slight acidity to test-papers is permitted, thus meeting Mr. Proctor's objection that neutrality cannot be determined by test-papers. The 1868 liquor contained 3¼ oz. of carbonate in 3 pints.

Liquor Ammonii Citratis.—Formerly made with strong solution of ammonia, the result not being nice. Now citric acid 2½ oz. is dissolved in water 12½ oz., neutralised with ammonium carbonate (1¾ oz.), and made up to 1 pint. Strong solution deleted.

Liquor Arsenicalis.—Arsenious anhydride ("acid" in 1885) and potassium carbonate are now $87\frac{1}{2}$ gr. each to the pint, otherwise the formula is same as in 1885.

Liquor Arsenici Hydrochloricus.—Arsenious anhydride, now $87\frac{1}{2}$ gr. to the pint.

Liquor Arsenii et Hydrargyri Iodidi.—Made weaker and the synonym, "Donovan's solution" omitted. Now $37\frac{1}{2}$ gr. each arsenious and mercuric iodides to the pint (formerly 90 gr.).

Liquor Atropinæ Sulphatis.—Salicylic acid 2 gr. to 4 oz. of distilled water, now used for preservation. The water is sterilised by boiling, and the acid and atropine sulphate $17\frac{1}{2}$ gr. dissolved in it when cold.

Liquor Bismuthi et Ammonii Citratis.—The compilers have adopted Peter MacEwan's suggestion to make this from freshly precipitated bismuth citrate (*C. & D.* xxviii. 17), but have worked out a better formula than the one recommended by him. Bismuth oxynitrate 613 gr. is dissolved in nitric acid 1 fl. oz. and water 1 oz. Water is added to the solution until it becomes opalescent; then a solution of potassium citrate 613 gr. and potassium carbonate 175 gr. in water is added, the mixture brought to the boil, and when cold the precipitate is collected, washed free from nitrate, dissolved in solution of ammonia q.s., and water added to 1 pint. The strength is the same as before—bismuth oxide 3 gr. in ʒj.—still stronger than Schacht's, and as there is no excess of alkaline citrate in it the solution also differs in this respect.

Liquor Calcis Saccharatus.—Strength the same as before, but the sugar is dissolved in the water, and the lime shaken with the solution. A necessary improvement. The clear solution is s*i*phoned off [note, s*i*phon]. Also better. Sp. gr. 1 055.

Liquor Epispasticus.—Now 10 oz of cantharides in No. 20 powder to 1 pint, which is a close return to the 1867 8 oz., when, however, the menstruum was acetic acid and ether, not acetic ether. The supposition that 5 oz. in 1885 gave as strong a liquor as 8 oz. in 1867 has proved to be fallacious—naturally.

Liquor Ferri Acetatis.—A pint of solution is made with half the quantities of ferric-sulphate solution, ammonia solution, and glacial acetic acid prescribed in the B.P., 1885, for liq. ferri acet. fort., the process being the same.

Liquor Hydrargyri Perchloridi.—Ammonium chloride is omitted.

Liquor Morphinæ Acetatis.—For 4 oz. use morphine acetate $17\frac{1}{2}$ gr., dilute' acetic acid 38 minims, 90-per-cent. alcohol 1 fl. oz., and water.

Liquor Morphinæ Hydrochloridi—Same as the last, but with morphine hydrochloride and dilute hydrochloric acid.

Liquor Potassæ.—The formula is omitted. One fluid ounce contains 27 gr. KOH as before, but compounders must bear in mind that caustic potash of commerce is not 100-per-cent. KOH.

Liquor Potassii Permanganatis.—Now $87\frac{1}{2}$ gr. to the pint.

Liquor Sodii Arsenatis.—Note that an "i" is dropped from "arseniates," also $\frac{1}{2}$ gr. of the anhydrous arsenate in 4 oz.; $17\frac{1}{2}$ gr. now required.

Liquor Strychninæ Hydrochloridi.—William Duncan scores. He showed that excess of hydrochloric acid was the cause of the solution precipitating in cold weather. It is now made with strychnine hydrochloride $17\frac{1}{2}$ gr., 90-per-cent. alcohol 1 fl. oz., and water to 4 fl. oz.

Liquor Trinitrini.—Another acquiescence with Latinity (trinitrin*æ* before). The synonyms: Liquor nitroglycerini, liquor glonoini, and solution of glononin. The strength is the same sa in the 1890 Additions—viz., $17\frac{1}{2}$ gr. of trinitroglycerin to 4 fl, oz. of 90-per-cent. alcohol.

Liquor Zinci Chloridi.—Made as formerly, but the sp. gr. is 1·530.

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Lotio Hydrargyri Flava.—Now 2 gr. of mercuric chloride to 1 oz. of lime-water. "Yellow wash" is a synonym.

Lotio Hydrargyri Nigra.—Synonym, "black wash." Strength as before, but Henderson's suggestion to prevent oxidation by adding glycerin ($\frac{1}{2}$ fl. oz. to 1 pint), and a later suggestion to suspend with mucilage of tragacanth ($1\frac{1}{4}$ fl. oz. to 1 pint), are adopted.

MISTURÆ.

A number of alterations are observable which are not noted in the prefatory table, so we mention all the mixtures which have been changed.

Mistura Ammoniaci.—Syrup of tolu 4 fl. dr. takes the place of $\frac{1}{2}$ fl. oz. of water in the old formula.

Mistura Creosoti.—Acetic acid is omitted. The mixture contains 1 minim each of creosote and spirit of juniper (which is now a stronger preparation, *vide infra*), and 30 minims of syrup in 1 fl. oz. The dose is halved.

Mistura Cretæ.—Tragacanth 15 gr. takes the place of acacia, and sugar $\frac{1}{2}$ oz. the place of syrup, in the old formula.

Mistura Ferri Composita.—Owing to spt. myristicæ being increased in strength the quantity in the old formula for this mixture is reduced to 50 minims, and the rose-water increased to 10 oz.

Mistura Guaiaci.—Same as before, but tragacanth 35 gr. in place of gum acacia.

Mistura Olei Ricini.—The avalanche of criticism which came upon this Irish importation into the 1890 Additions has been effectual. A new formula is inserted—viz., castor oil, 3 fl. oz.; acacia mucilage, $1\frac{1}{2}$ fl. oz.; orange-flower water, 1 fl. oz.; and cinnamon-water, $2\frac{1}{2}$ fl. oz. A curious way of mixing is adopted. The mucilage is put into a mortar and the oil and mixed waters blended with it alternately in portions. We cannot help saying that there was far more need for the insertion of a mistura olei morrhuæ than for the retention of this castor-oil mixture.

Mistura Sennæ Composita.—Alterations have been made in the formula which may induce the Board of Trade to allow mist. sennæ co., B.P., to be used for ships' medicine-chests. At present it is inconvenient for many chemists to have two preparations. The formula now is:—Mag. sulph., ʒv.; ext. glycyrrhiz. liq., ℥j.; tr. card. co., ℥ij.; spt. amm. arom., ℥j.; inf. sennæ ad Oj. Dose, ℥j. to ℥ij.

* * * *

Mucilago Acaciæ.—The gum is to be rinsed with a little water before it is dissolved.

Mucilago Tragacanthæ.—Same quantities as before, but "water to 10 fl. oz."

Oleum Phosphoratum.—Now 1 part of phosphorus to 99 fluid parts of recently-heated almond oil, instead of 1 to 109.

Oxymel.—As before, but 5 oz. of water, or sufficient to produce oxymel. Sp. gr. 1·320 is now prescribed.

Oxymel Scillæ.—Evaporation is avoided by macerating squill $2\frac{1}{2}$ oz. in acetic acid $2\frac{1}{2}$ fl. oz. and water 8 oz. for seven days, after which 10 oz. of liquor is pressed out and mixed with clarified honey, 27 fl. oz., or enough to give a product of sp. gr. 1·320.

PILULÆ.

The criticism which has passed on this class of galenicals has been extremely liberal, and almost as conflicting. The compilers have ignored most of it, but succeed in making what we consider good improvements. Syrup of glucose is a good substitute for treacle, or rather golden syrup, which was officialised in the 1885 B.P. instead of true treacle. The latter is quite a different excipient, the greater proportion of free potassium carbonate in it binding aloetic masses strongly. However, that, from the B.P. point of view, is sufficient reason for adopting an excipient in which there is no alkali rather than a variable quantity thereof. We observe that there is no change in the formulæ of the following pills:—Aloes barb, aloes et asaf., aloes socot., colocynth. co., coloc. et hyos., and hydrarg. Doses are reduced to 4 to 8 gr., with the exception of pil. ferri 5 to 15 gr., pil. phosphor. 1 to 2 gr., pil. quin. sulph. 2 to 8 gr., and pil. plumbi c. opio, and pil. saponis co., which are 2 to 4 gr. Subjoined are particulars of the changes effected:—

Pilula Aloes et Ferri.—Aloes and pulv. cinnam. co. in the same proportion as before, but dried ferrous sulphate 1 oz., and glucose syrup 3 oz. (by weight) to mass. Contains 1 oz. aloes in $4\frac{1}{2}$ instead of 1 in $5\frac{1}{4}$ as before.

Pilula Aloes et Myrrhæ.—Saffron is omitted. The ingredients now are Socotrine aloes 2, myrrh 1, and glucose syrup 1½.

Pilula Cambogiæ Composita.—Glucose syrup 1 oz. takes the place of syrup in the old formula.

Pilula Colocynthidis Composita.—The potassium sulphate has to be in *very fine* powder, which goes a little way to meet the objection to the pill falling, but does not make it perfect by any means.

Pilula Ferri.—"This iron pill is commonly known as 'Blaud's Pill'" is no longer said of the preparation. The compilers are apparently of opinion that "they do those things better in France," for they have taken the French Codex idea of making the pills with dried ferrous sulphate (150 gr.) and dried *sodium* carbonate (95 gr.). The excipient consists of gum acacia 50 gr., tragacanth 15 gr., syrup 150 gr., glycerin 10 gr., and water 20 gr. All parts of the excipient except the gums are mixed with the iron salt, the sodium carbonate then added, mixed, and after the reaction is complete the gums are added, and a mass made, which is divided into 5-gr. pills.

Pilula Hydrargyri Subchloridi Composita is now massed with castor oil ʒiij. and 90-per-cent. alcohol ʒj.

Pilula Ipecacuanhæ cum Scillâ.—Syrup of glucose replaces treacle.

Pilula Phosphori.—A new formula on William Martindale's lines. Phosphorus 10 gr. is dissolved in carbon bisulphide 33 minims, and added to a melted mixture of white beeswax and lard of each 125 gr., the whole being mixed and massed with kaolin 115 gr. The mass is nearly double the strength of the 1885 one.

Pilula Plumbi cum Opio.—Syrup of glucose 4 gr. is used in place of conf. rosæ gr. vj.

Pilula Rhei Composita.—Syrup of glucose 2¾ oz. takes the place of the glycerin and treacle (4 oz.), so that the pill is slightly stronger. The mass is much better.

Pilula Saponis Composita.—Hard soap 1½ oz. and syrup of glucose ½ oz. to powdered opium ½ oz.

Pilula Scammonii Composita.—Same as before, but with tr. zingib. ℥iij. in place of strong tincture and spirit.

Pilula Scillæ Composita.—Syrup of glucose 1 oz. takes the place of treacle 2 oz.

* * * *

Podophylli Resina.—The water into which the concentrated tincture is poured is acidulated with one twenty-fourth of its bulk of hydrochloric acid, and instead of drying "in a stove" it is to be dried at a "temperature not exceeding 100° F." Solubilities in alcohol, ammonia solution, and ether are given, and a limit of ash (1 per cent.) is fixed. A good example of the advantage to be derived from having galenical manufacturers amongst the compilers.

Potassii Tartras Acida.—Cream of tartar must now contain 97½ per cent. of absolute cream of tartar, which is of better quality than the 1885 article.

PULVERES.

Several changes are noticeable in manipulation as well as in strength; but no definition is given as to the fineness of powder to be used in making compound-powders. The compilers are content with "in powder." Without being hypercritical we may say "very fine powder" in pil. coloc. co. suggests degrees of fineness even in fine powders. The preface states that "different degrees of coarseness or fineness of the powders of drugs are distinguished by numbers, such as No. 20 or No. 60, which indicate the number of parallel wires of ordinary thickness contained within a linear inch, in either transverse direction, of the sieves employed by pharmacists." This definition is strictly confined to drugs which are to be subjected to such processes as percolation and maceration. It would be serviceable to state, in connection with compounded powders, maximum and minimum limits of comminution. We also observe that the directions respecting all powders have been contracted to the single word "Mix." The following are all the changes noticeable:—

Pulvis Amygdalæ Compositus.—In the directions we are told that after the almonds have been blanched and wiped with a soft cloth they are to be "dried thoroughly by exposure in a warm place for twenty-four hours."

Pulvis Antimonialis.—Maximum dose is now increased to 6 gr.

Pulvis Cretæ Aromaticus.—Saffron omitted. A tribute to India which we regret, and so will everybody.

Pulvis Elaterini Compositus.—Maximum dose reduced to 4 gr.

Pulvis Glycyrrhizæ Compositus.—Maximum dose increased to 120 gr.

Pulvis Opii Compositus.—Maximum dose increased to 10 gr.

Pulvis Sodæ Tartaratæ Effervescens.—Directions:—Dose for a draught: The alkaline powder (in blue paper) to be dissolved in nearly ½ pint of cold or warm water, and the acid powder (in white paper) added. We presume that these directions are given so that chemists and druggists may place them on their labels. It is interesting to note that the Pharmacopœia, generally a stickler in legality, speaks of "pharmacists," which, strictly speaking, chemists and druggists are not.

SPIRITUS.

Before proceeding to consider the changes which have been made in the medicinal spirits (all of them have been much increased in strength), it will be appropriate to refer to the solvent in them all—*spiritus rectificatus*. A remark in the preface, which is the strongest manner of emphasising a change, is as follows:—

> The inquiry as to the best menstrua [for tinctures] has led to the adoption of ethylic alcohol—that is, ethyl hydroxide of five several degrees of dilution—namely, alcohol (90 per cent.), alcohol (70 per cent.), alcohol (60 per cent.), alcohol (45 per cent.), and alcohol (20 per cent.). The name *proof spirit* has been abandoned.

The initial alcohol is called *Spiritus rectificatus* in Latin, *Alcohol* (90 *per cent.*) in English, and has the synonym *Rectified spirit*. In our January article on the new B.P. we mentioned that there were to be four dilutions of 90-per-cent. alcohol, but we were wrong in saying that one of these was to be sp. gr. 0·884, and another 0·896; they should have been 0·890 and 0·976. The others were right, and the statement of the principle is exactly what is contained in the published work.

The initial alcohol is more clearly defined than rectified spirit has hitherto been. Absence of fixed matter; oily and resinous substances; fusel oil and allied impurities (qualitatively and quantitatively); aldehyde; and tannic acid, excess of aldehyde and other organic impurities are each provided for by well-known tests. It is stated that it contains 1·35 per cent. by volume more ethyl hydroxide than the 1885 rectified spirit. The dilutions are as follows:—

Alcohol (70 per cent.).—Mix 100 volumes of 90-per-cent. alcohol and 31 volumes of water. Sp. gr. 0·8900.

Alcohol (60 per cent.).—Alcohol (90 per cent.) 100 volumes and water 53⅔ volumes. Sp. gr. 0·9135.

Alcohol (45 per cent.).—Alcohol (90 per cent.) 100 volumes and water 105⅓ volumes. Sp. gr. 0·9436.

Alcohol (20 per cent.).—Alcohol (90 per cent.) 100 volumes and water 355¾ volumes. Sp. gr. 0·9760.

We note that the percentages are approximate. The B.P. remarks: "On mixing alcohol (90 per cent.) and water, contraction of volume and rise of temperature occur. When such a mixture is prescribed in the British Pharmacopœia, the cooled liquid should be employed." It will be remembered that alcohol (90 per cent.) is 58° over proof, and costs more than the old 56 o. p. spirit.

Spiritus Ætheris Compositus.—A new process is given. D. B. Dott some time ago adversely criticised the method introduced into the 1885 edition, pointing out that the ultimate residue [("oil of wine") prescribed became conspicuous by its absence, so that a more precise formula is now given: 78 fl. oz. of 90-per-cent. alcohol and 36 fl. oz. of sulphuric acid are mixed, and after twenty-four hours the mixture is distilled at a temperature of 341° F. The ethereal upper layer of the distillate is then separated, neutralised with sodium bicarbonate and water, and mixed with ether, 5½ fl. oz. and 80-per-cent. alcohol 38 fl. oz.

Spiritus Ætheris Nitrosi.—The quantities are not changed, but 20 fl. oz. of 90-per-cent. alcohol is placed in the receiver, and after distillation is complete as much alcohol is added as will make the spirit contain 2½ per cent. of ethyl nitrite. The quantity of alcohol indicated is 20 fl. oz., but the tests show that nearer 30 oz. will be required, as 2½ per-cent. of $C_2H_5NO_2$ is aimed at. Sp. gr. 0·838 to 0·842. The directions look as if the formula had been reconstructed without experiment. Our experience is that when the alcohol is placed in the receiver there is so much saving of ethyl nitrite that the yield of spirit of the old pharmacopœial strength is greater. Although Dr. John Attfield has been of singular assistance to the drug-trade in proving that "sweet spirit of nitre" is not "spirit of nitrous ether," the editor of the British Pharmacopœia does not hesitate to state that "spirit of nitrous ether" is "sweet spirit of nitre," the latter term being now added as a synonym. We therefore urge the trade to note this matter, as there should be no difficulty of inspectors under the Sale of Food and Drugs Act getting a conviction against any retailers who may sell the old P.L. spirit, or any spirit other than the B.P. one, for "sweet spirit of nitre." See the article on this subject in THE CHEMIST AND DRUGGIST, January 29, page 184, and note that the suggestions on the preparation of spiritus ætheris nitrosi are precisely what the B.P. has incorporated. Allen's nitrometer test is retained, and Eykman's rejected, without the objectionable references to a class journal.

Spiritus Ammoniæ Aromaticus.—Sp. gr. 0·888 to 0·893 now. Total alkalinity is determined with volumetric sulphuric acid, and carbonate with barium-chloride solution. Dose: 20 to 40 minims repeated, or 60 to 90 single.

Spiritus Ammoniæ Fetidus.—Alkalinity is now determined with standard sulphuric acid.

Spiritus Armoraciæ Compositus.—A fourth of the quantities of solids in the 1885 B.P. are used with alcohol 90 per cent. 1¼ pint, and water 1½ pint; sp. gr. 0·920.

Spiritus Cajuputi.—Now 1 in 10 instead of 1 in 50.

Spiritus Cinnamomi.—Ditto.

Spiritus Juniperi.—Now 1 in 20 instead of 1 in 50. If solution is not clear agitate with powdered talc and filter.

Spiritus Lavandulæ.—Now 1 in 10 instead of 1 in 50.

Spiritus Menthæ Piperitæ.—Ditto.

Spiritus Myristicæ.—Ditto.

Spiritus Rosmarini.—Ditto.

Spiritus Vini Gallici.—Should be "matured by age," and contain not less than 43½ per cent. by volume of ethyl hydroxide.

Alcohol (90 per cent.) is used in making all the essential-oil spirits. The doses are mostly 5 to 20 minims.

* * * *

Succus Limonis.—Work by T. H. W. Idris and H. H. Robins has resulted in a more natural acidity being fixed—viz., 30 to 40 gr. of citric acid in 1 oz.; sp. gr. 1·030 to 1·040. When evaporated to dryness, and residue incinerated, not more than 3 per cent. of ash should remain.

Suppositoria Glycerini.—Same as in 1890 "Additions," except that the evaporated product must weigh 1,563 gr. instead of 1,560 as formerly.

Suppositoria Morphinæ.—Now contain ¼ gr. instead of ½ gr.

SYRUPI.

A disappointing group. There is little concession in it to the many criticisms which have been passed upon the inordinate thickness of syrups, and no advantage is taken of the superior quality of modern sugar by permitting the syrups to be made in the cold. The high-class "chemists' sugars" now obtainable are soluble in the cold in the quantities of liquids prescribed in the Pharmacopœia. Of course, there is no reason why compounders should not make syrups in the cold, if heat is not an essential part of the process as for the extraction of a principle or principles. In the subjoined notes we deal with the changes in old preparations. New syrups have already been referred to.

Syrupus Ferri Iodidi.—Quantities are changed—viz., iron wire, ½ oz.; iodine, 726 gr.; and water to 1 pint. Sugar, 16½ oz., is added to boiling water, 6 oz., and heated until dissolved. Half an ounce of the syrup is diluted with an equal volume of water and set aside. The iodine and iron wire are dissolved by heat in a flask with 2½ oz. of water, the liquid filtered while hot into the syrup, and the flask washed out with the boiling diluted syrup. Boiling water is then passed through the filter to make a pint of syrup, sp. gr. 1·380 to 1·387. A test is added—viz., precipitation with sodium bicarbonate and estimation of iodine by the sodium-thiosulphate method. The syrup is stronger, as 11 minims (formerly 14) contain 1 gr. of ferrous iodide.

Syrupus Ferri Phosphatis.—Jones's process, recommended by R. Wright and endorsed by the B.P.C., is adopted. Iron wire, 75 gr., is dissolved in concentrated phosphoric acid, 1¼ oz., and an equal volume of water. Chemical action is promoted by heat, and when the solution is cold it is filtered into 14 oz. of syrup, the whole making 1 pint. The syrup contains fully a third less acid than the 1880 one.

Syrupus Limonis.—This is now made by macerating fresh lemon-peel, 1 oz., in 90-per-cent. alcohol, 1½ oz., for seven days. Press, filter, and add sufficient spirit to make to 2 oz. Sugar, 38 oz., is dissolved in lemon-juice, 25 oz., and the tincture added when cold. Weight of product, 4 lbs. 1 oz. A much-desired reform.

Syrupus Papaveris.—What is to take the place of this now that it is deofficialised?

Syrupus Scillæ.—The amount of sugar is lessened by 2 oz. Thanks.

Syrupus Sennæ.—A new process has been devised, and the amount of senna increased. Senna, 40 oz., is macerated in 20-per-cent. alcohol, 2 pints, for three days. It is then pressed, the liquid reserved, and the marc broken up and re-macerated with 15 oz. of the alcohol for twenty-four hours. This is again pressed and remacerated with another 15 oz. of the alcohol for three hours, and pressed. The third pressing is evaporated to such a volume that when added to the first two the whole shall measure 2 pints. The product is heated to 180° F. for a few minutes, set aside for twenty-four hours, filtered, and water added to make 40 oz.; sugar 50 oz. is added and dissolved by heat. Lastly, when cool, oil of coriander, 10 minims, dissolved in 90-per-cent. alcohol, 40 minims, is added, and the whole well shaken. Dose, ʒss. to ʒij.

Syrupus Zingiberis.—The omission of strong tincture of ginger (a wholly inexplicable procedure) compels the compilers to make a little of it for this syrup, so ½ oz. of ginger is percolated with alcohol (90-per-cent.) to provide 1 oz. of tincture, which is added to sufficient syrup to make 20 fl. oz. The product now contains a third more ginger, and it is well to remember that the process for tr. zingib. fort. is concealed in the formula.

* * * *

Tabellæ Trinitrini.—A new name for an old friend which has grown to double the size (5 gr.) without increasing in strength. Apparently it is intended that it should remain a speciality, as no formula yet appears. Considering that it is purely a galenical preparation, and that the compilers recognise the competence of compounders to handle nitroglycerine by giving a formula for the liquor, some explanation of the reserve in this case should be forthcoming. As to tabellæ generally *et hoc genus omne*, thus the pharmacopœial preface:—

> "It has not been thought desirable to describe in the Pharmacopœia various pharmaceutical devices which have been introduced in recent years for the more easy administration of medicines. When so directed by the practitioner, the drugs of the Pharmacopœia may be dispensed in such non-official forms as capsules, cachets, granules, and the like; but the drugs themselves, in all such cases, must respond to the official characters and tests."

This paragraph is significant. We pass over the non-recognition of popular forms of medication: whether the B.P. is to be up to date or not is a matter which chiefly concerns the publishers of the book. But the last sentence lays down a standard which may become awkward. If we sell a tabloid or tablet of sulphonal, which contains, say, a trifle of starch or gum to make it disintegrate, it will not strictly "respond to the official characters and tests." Will that be a misdemeanour? If not, the British Pharmacopœia is not authoritative; therefore it had better have left the matter alone altogether.

TINCTURÆ.

The alterations made upon tinctures are considerable. Many of the changes are the result of the division of this class of preparations into two groups with uniform doses—5 to 15 minims and ½ to 1 dr.—while changes in the alcoholic menstrua are observable in every instance. In regard to alcoholic menstrua the rectified spirit of the 1885 Pharmacopœia has a sp. gr. of 0·838, and contains 84 per cent. by weight of ethyl hydroxide. The rectified spirit or alcohol of the 1898 B.P. contains 90 per cent. by volume of ethyl hydroxide. This is a spirit of sp. gr. 0·834.

The revisers appear to have carefully endeavoured not to alter the alcoholic strengths of tinctures much, but the tendency has been to lower the proportion of alcohol, this being in conformity with the experience that strong alcohol is not a good solvent of vegetable substances.

The alterations in the proportions of active ingredients will require the careful attention of pharmacists, as it is only potent preparations which have been touched, and that because of the medical demand for uniform doses. Thus, the proportion of aconite tubers for tr. aconiti is reduced from 2½ oz. to 1 oz. to the pint, while the strength of tr. colchici sem. is increased from 2½ oz. to 4 oz. to the pint. Amongst the tinctures which are changed in composition are tr. aloes (ext. glycyr. liq. used), tr. belladonnæ (made with liquid extract), tr. camph. co. (made with tr. opii), tr. chloroformi et morphinæ (scarcely related to the 1885 preparation), tr. nucis vomicæ (made with liquid extract), and tr. opii ammoniat. (ammonia strength reduced). These and other changes are fully detailed below.

The Pharmacopœia describes two general processes for preparing tinctures, and in the formulæ directs them to be made by the one process or the other without repetition of the details. The processes are substantially as follows:—

Percolation.—Moisten the drug with the prescribed quantity of the menstruum and set the mixture aside in a closed vessel for twenty-four hours. Pack the mixture in a percolator, and pour over it at intervals further portions of the menstruum, allowing percolation to proceed slowly but continuously, and less slowly towards the end, until an amount of the fluid equal to three-fourths of the volume of the finished tincture has been collected. Remove the marc from the percolator and submit it to pressure. Mix the expressed fluids with the percolate, and then with a sufficient quantity of the menstruum to form the required volume of the tincture. A cylindrical percolator, preferably of glass or earthenware, may be employed, of such dimensions as to present to the menstruum a column of drug at least six times as long as wide, or a conical one may be employed.

Maceration.—Soak the drug in the whole of the menstruum in a closed vessel for seven days, occasionally agitating; strain, press the marc, and mix the fluids. The maceration tinctures are not to be made up to a prescribed volume with the menstruum, so that on this point the Pharmacopœia will come into line with continental Pharmacopœias. An entirely new departure is made in the method of preparing a few potent tinctures (*e.g.*, belladonna and nux vomica), fluid extracts, and not the crude drugs, being used for these.

The clarification of the preparations is to be by subsidence or filtration, or both, as the pharmacist's experience dictates.

Tables will most conveniently show the alterations which have been made in the simple tinctures. The subjoined explain themselves:—

Tinctures with Doses of 5 to 10 minims.

Tincture	Degree of Commi-nution *	Pro-cess †	Strength ‡ 1898	Strength ‡ 1885	Alcohol p.c. in Men-struum
Aconiti	40	P.	20	8	70
Belladonnæ §	—	—	15	20	60
Cannabis indicæ ...	—	—	20	20	90
Cantharidis	40	M.	80	80	90
Capsici	20	M.	20	27	70
Cocci	—	M.	10	8	45
Colchici sem.	30	P.	5	8	45
Croci	—	M.	20	20	60
Digitalis	20	P.	8	8	60
Ferri perchlor. ...	—	—	4	4	30
Gelsemii	40	P.	10	8	60
Lobeliæ etherea ...	40	P.	5	8	—
Nucis vomicæ § ...	—	—	6	—	—
Opii	—	—	13⅓	13⅓	—
Podophylli	—	—	30	55	90
Scillæ	—	M.	5	8	60
Stramonii	20	P.	5	8	45
Strophanthi	30	P.	40	20	70

Tinctures, with Doses of ½ to 1 fl. dr.

Tincture	Degree of Commi-nution *	Pro-cess †	Strength ‡ 1898	Strength ‡ 1885	Alcohol p.c. in Men-struum
Asafetidæ	—	—	5	8	70
Aurantii [recent.] ...	—	M.	3½	4	90
Buchu	20	P.	5	8	60
Calumbæ	20	M.	10	8	60
Cascarillæ	40	P.	5	8	70
Chiratæ	40	P.	10	8	60
Cimicifugæ	40	P.	10	8	60
Cinchonæ	40	P.	5	5	70
Cinnamomi	40	P.	5	8	70
Conii	40	P.	5	8	70
Cubebæ	—	P.	5	8	90
Hamamelidis	20	P.	10	10	45
Hydrastis	60	P.	10	10	60
Hyoscyami	20	P.	10	8	45
Jaborandi	40	P.	5	4	45
Jalapæ	40	P.	5	8	70
Krameriæ	40	P.	5	8	60
Limonis	—	M.	4	8	90
Lupuli	—	—	5	8	60
Myrrhæ	—	—	5	8	90
Pruni Virginianæ ...	20	M.	5	—	30
Quassiæ	—	M.	10	27	45
Quillaiæ	20	P.	20	—	60
Quininæ ‖	—	—	175	160	—
Senegæ...	40	P.	5	8	60
Serpentariæ	40	P.	5	8	70
Sumbul...	—	M.	10	8	70
Tolutana	—	M.	10	8	90
Zingiberis	40	P.	10	8	90

* The figures indicate the number of meshes per linear inch through which the comminuted drug should pass.

‡ These figures stand for the volumes of finished tincture which represent 1 part of the crude drug in the percolation-process, and the volumes of menstruum to 1 of drug in maceration.

† M. = maceration-process. P. = percolation-process.

§ Made from liquid extract.

‖ See note.

Tinctura Aloes.—Now made with extract of Barbados aloes ½ oz. and liquid extract of liquorice 3 oz. Dose, ʒss. to ʒj. repeated, or ʒiss. to ʒij. single.

Tinctura Belladonnæ is standardised—viz., 0·048 to 0·052 per cent. alkaloids.

Tinctura Aurantii.—Note that the dried-peel tincture is discarded.

Tinctura Benzoini Composita.—For a pint use 16 instead of 17 oz. of 90-per-cent. alcohol, as in later reprints of the 1885 B.P. Dose, ʒss. to ʒj.

Tinctura Camphoræ Composita.—The suggestion of Samuel Lawrence (*C. & D.* xxviii. page 60) to use tincture instead of powdered opium is adopted. The formula now contains 585 minims tr. opii in place of the solid, and is made with 60-per-cent. alcohol. Dose, ʒss. to ʒj.

Tinctura Cardamomi Composita.—"Raisins of commerce" are specified because there is no longer a monograph on uvæ. Dose, ʒss. to ʒj.

Tinctura Chloroformi et Morphinæ Composita.—The last word is added, and may cause confusion with the discarded tr. chloroformi comp. Might have been called "Glycerinum chloromorphicum." The old and bad formula for this imitation chlorodyne is rejected, and one for what is generally called "transparent chlorodyne" inserted. It is an amendment of a *C. & D.* formula, as the following shows:—

	C. & D.	B.P.
Morphine hydrochloride	12 gr.	87½ gr.
Chloroform	½ oz.	1½ oz.
Tincture of cannabis indica	2 dr.	2 oz.
Tincture of capsicum	1 dr.	½ oz.
Dilute hydrocyanic acid	1 dr.	1 oz.
Rectified spirit	1½ oz.	to 1 pint
Oil of peppermint	6 min.	14 min.
Glycerin	to 6 oz.	5 oz.

Ten minims contain chloroform ♏$\frac{3}{4}$, acid. hydrocyan. dil. ♏$\frac{1}{2}$, morphinæ hydrochlor. gr. $\frac{1}{11}$ (four times more than in tr. chlor. et morph, 1885). Dose, 5 to 15 minims.

Tinctura Cinchonæ Co.—The serpentary is to be in No. 40 powder; tincture of cinchona 10 oz. is used instead of the bark, and is added to the expressed tincture of the solid ingredients macerated in 10 oz. of 70-per-cent. alcohol. Saffron remains here. Dose, ʒss. to ʒj.

Tinctura Guaiaci Ammoniata—Ammonium carbonate (of the spt. amm. arom.) is omitted. Ol. myristiæ ʒss., ol. limonis ♏xx., and liq. amm. fort. ℥iss. are added to alcohol (90-per-cent.) ℥xvj. for maceration. Dose, ʒss. to ʒj.

Tinctura Iodi.—The iodine and iodide are dissolved in water ½ oz. before adding the spirit. Sensible. Dose, 2 to 5 minims.

Tinctura Jalapæ.—Standarised to contain 1·5 gramme of resin in 100 c.c.

Tinctura Kino.—The glycerin, water, and kino are rubbed into a smooth paste before adding 90-per-cent. alcohol 10 oz. and macerating twelve hours. The filtered tincture is made up to a pint with alcohol. Dose, ʒss. to ʒj.

Tinctura Nucis Vomicæ.—Made with liquid extract of nux vomica 2 fl. oz., water 2 oz., and 90-per-cent. alcohol to a pint. Should yield between 0·24 and 0·26 per cent. of strychnine. Dose, 5 to 15 minims.

Tinctura Opii—Made in the good old-fashioned way—viz, rub opium 3 oz. to a paste with water 10 oz. (heated to 200° F.), set aside six hours, add 90-per-cent. alcohol 10 oz., and set aside for twenty-four hours; strain, press, mix, set aside for another twenty-four hours, and filter. Then standardise by the sal ammoniac, lime, and ether method, and dilute with equal parts of alcohol (90-per-cent.) and water, so that 100 c.c. will contain 0·75 gramme of morphine. "Laudanum" is given as the synonym, but this is not new, the name having been introduced in the 1888 reprint at the same time that "Paregoric elixir" was made a synonym of tr. camph. co.

Tinctura Opii Ammoniata.—Tincture of opium 3 fl. oz is now used in place of the solid. Saffron is omitted, and solution of ammonia 4 oz. employed instead of the strong solution. Dose, ʒss. to ʒj.

Tinctura Quassiæ.—Wood in rasps instead of chips, and strength almost trebled. (*Vide antea.*)

Tinctura Quininæ—Now 175 gr. of the hydrochloride to the pint of tincture of orange, and made without heat, because the tincture is much stronger in alcohol. Dose, ʒss. to ʒj.

Tinctura Quininæ Ammoniata.—175 gr. of quinine sulphate and ammonia solution 2 oz. to 18 oz. 60-per-cent. alcohol. Heat omitted. Dose, ʒss. to ʒj.

Tinctura Rhei Composita.—Saffron omitted, and 2 oz. of glycerin added to 1 pint, with 60-per-cent. alcohol. Dose, ʒj. to ʒij. as stomachic, ℥ss. to ℥j. as purgative.

Tinctura Sennæ Composita.—Now made 4 oz. senna to 1 pint, but no change in the other ingredients, except the spirit, which is 45-per-cent. alcohol. Observe that the tincture is now made by maceration, and that "Composita" has been added to the name. Dose, ʒss. to ʒj. repeated, or ʒij. to ʒiv. single.

Tinctura Strophanthi.—The reduction of the alcoholic strength of the menstruum to 70 per cent. does away with the necessity for removing the fixed oil with ether. The drug strength of the tincture is reduced to one-half.

Tinctura Tolutana is now called "Tincture of *Balsam of* Tolu." The italicised words are new.

Tinetura Valerianæ Ammoniata.—As in a case already cited, the compilers have wisely considered it to be unnecessary to use distilled spt. ammon. arom. in this instance, and they give a menstruum *minus* ammonium carbonate—viz., 60-per-cent. alcohol 18 fl. oz., ammonia solution 2 fl. oz., oil of lemon 20 minims, oil of nutmeg 30 minims, to 4 oz. of No. 40 powder valerian. Made by maceration. Dose, ʒss. to ʒj.

On the whole, the tinctures are an improved class of galenicals. The omission of tr. zingib. fort. is the most notable and the least pleasing of deletions. It is a tincture in regular demand. It is a good move to give the tincture of fresh orange-peel sole place as an orange flavour, but we must look sharp after our supplies of the raw material in future, since it is a season article.

Trochisei.—Reference has already been made to the new lozenges and new directions for compounding. The only alterations in strength are trochisci potassii chloratis and sodii bicarbonatis, which are reduced from 5 to 3 gr. in each. These are both made with the rose basis.

UNGUENTA.

No class of preparations has undergone so many changes as the ointments—indeed, it seems almost impossible to revise a B.P. without remodelling the ointments. Only five are not changed, and in some of these there is alteration of directions. The alkaloidal ointments are all made now with the pure alkaloids dissolved in oleic acid. The bases are greatly changed.

Unguentum Aeidi Borici.—Now 1 in 10 instead of 1 in 7, with white paraffin ointment.

Unguentum Acidi Carbolici.—Now 1 in 25 instead of 1 in 17. The phenol, ½ oz., is dissolved in glycerin, 1½ oz., and white paraffin ointment, 10½ oz., is added.

Unguentum Acidi Salicylici.—Now 1 in 50 instead of 1 in 28, with white paraffin ointment.

Unguentum Aconitinæ.—Now 1 in 50 instead of 1 in 60. The aconitine is dissolved in eight times as much oleic acid by heat, and lard (*not* benzoated) added.

Unguentum Atropinæ.—Now 1 in 50 instead of 1 in 60, made in same way as unguentum aconitinæ, 10 gr. of atropine being dissolved in oleic acid 40 gr.

Unguentum Belladonnæ.—Now made with liquid extract instead of alcoholic extract, as formerly. Of the extract 2 fl. oz. is evaporated to ¼ oz., and mixed with benzoated lard 2¼ oz.

Unguentum Cantharidis.—Now 1 in 10 instead of 1 in 7. The bruised cantharides is digested at 120° F. for twelve hours in benzoated lard 10 oz., which is substituted for wax and olive oil.

Unguentum Cetaeei.—The amount of almond oil is decreased by 8 oz.

Unguentum Chrysarobini.—Old formula, but the chrysarobin is triturated with the melted lard, and the heat is continued until the chrysarobin is dissolved.

Unguentum Conii.—The 10 gr. of boric acid in the 1890 formula is omitted.

Unguentum Creosoti.—Now made 1 in 10 with hard (4) and soft white (5) paraffins.

Unguentum Eucalypti.—Now 1 in 10 instead of 1 in 5, and with hard (4) and soft white (5) paraffins.

Unguentum Gallæ.—Now 1 in 5 instead of 1 in 6½, and to be mixed by trituration.

Unguentum Gallæ c. Opio.—Now contains 1 gr. of opium in slightly over 12 (7½ per cent.) instead of 1 in 14½. Also mixed by trituration.

Unguentum Glycerini Plumbi Subaeetatis.—Now 1 in 6 instead of 1 in 6½, and made with white paraffin ointment.

Unguentum Hamamelidis.—Now made with hydrous woolfat in place of simple ointment.

Unguentum Hydrargyri Ammoniati.—Now made with paraffin ointment instead of simple ointment.

Unguentum Hydrargyri Compositum.—Now contains mercurial ointment 1 in $2\frac{1}{2}$ instead of 1 in $2\frac{1}{4}$ as formerly—*i.e.*, 5 oz. ung. hyd. in place of 6 oz.

Unguentum Hydrargyri Iodidi Rubri.—Now 1 in 24 with benzoated lard instead of 1 in 28 with simple ointment.

Unguentum Hydrargyri Nitratis.—A new formula is adopted. Mercury, 1 oz., is dissolved in nitric acid, 3 fl. oz., without heat. Lard, 4 oz., and olive oil, 7 oz. (by weight), are heated on a sand-bath and transferred to a jar of about $5\frac{1}{2}$ pints capacity, so that the temperature of the fats shall be 290° F. The mercurial solution is added gradually, with constant stirring, and by the time the frothing subsides the temperature should be 200° F. Stir until cold. The synonym "Unguentum citrinum" is dropped. Dr. Attfield once suggested that "Citrine ointment" should be added.

Unguentum Hydrargyri Nitratis Dilutum.—Now 1 to 4 of yellow soft paraffin.

Unguentum Hydrargyri Oxidi Rubri.—Synonym, "Red precipitate ointment." Weaker—viz., 1 to 9 of yellow paraffin ointment.

Unguentum Hydrargyri Subchloridi.—Synonym, "Calomel Ointment" Weaker—1 in 10, with old basis.

Unguentum Iodi.—Stronger—viz., 1 in 25 instead of 1 in 31. Iodine 1, potassium iodide 1, glycerin 3, and lard 20.

Unguentum Iodoformi—As before, but with yellow paraffin ointment instead of benzoated lard. Nothing hides "Yody."

Unguentum Plumbi Acetatis.—Stronger—viz., 1 in 25 with white paraffin ointment; formerly 1 in $37\frac{1}{2}$ and adeps benz.

Unguentum Plumbi Carbonatis.—Weaker—viz., 1 in 10 instead of 1 in 8, with white paraffin ointment.

Unguentum Plumbi Iodidi.—Ditto.

Unguentum Potassii Iodidi.—Formerly 1 in 8 8, now 1 in 10, and the quantities adjusted thus:—Pot. iod. 50, pot. carb. 3, water 47, and benzoated lard 400. A slightly warmed mortar is prescribed, and the water is to be weighed.

Unguentum Resinæ.—Quite different—viz., resin, yellow beeswax, and olive oil, of each, 8; lard, 6. A better ointment.

Unguentum Staphisagriæ.—Formerly 1 of the seeds in 3, now 1 in $5\frac{3}{4}$—viz., seeds 2, yellow beeswax 1, and benzoated lard $8\frac{1}{2}$. Procedure as before, the wax being melted in the staphisagriated lard.

Unguentum Sulphuris—Same ingredients as before, but half the strength in sulphur.

Unguentum Sulphuris Iodidi.—A reversion to 1867. One of glycerin and the same of the iodide are rubbed together in a warmed mortar, and 23 of benzoated lard added.

Unguentum Veratrinæ.—The alkaloid (1) is rubbed with oleic acid (4), then warmed until dissolved, and lard (45) added.

Unguentum Zinci.—Same ingredients, but 1 of oxide in 7, instead of 1 in $6\frac{1}{2}$ as before.

Unguentum Zinci Oleatis—Altogether new. Zinc sulphate (2) is dissolved in water (4), and added to a solution of hard soap (4) in boiling water (40). The precipitate of "zinc oleate" is collected, washed with hot water, dried, and mixed with an equal weight of soft paraffin.

VINA.

Not many changes, but such as there are we comment upon.

Vinum Antimoniale.—The tartar emetic is dissolved in an ounce of boiling water before adding the wine. The B.P. is a quarter of a century "behind the fair" in this.

Vinum Aurantii.—Presence of salicylic acid is objected to.

Vinum Ipecacuanhæ.—*Io triumphe!* 1 oz. of liquid extract and 19 oz. of sherry.

Vinum Quininæ.—Quinine hydrochloride 1 gr. to 1 oz. of orange wine.

Vinum Xericum.—Should contain not less than 16 per cent. by volume of ethyl hydroxide, and no salicylic acid.

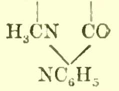
Here end the galenicals. We do not think we have missed any point of importance, and until the new book is available to all there should be no difficulty for the intelligent compounder in making with these notes and the 1885 edition and the 1890 Additions a fair estimate of what the 1898 B.P. is.

NOMENCLATURE.

There are some changes in nomenclature which appear to challenge criticism at the outset, and purists in Latinity will be shocked to note that the genitival nouns in such titles as "sodii arsenias" become adjectival prefixes in the English titles. But the preface disarms criticism by stating that the English is not a translation of the Latin. The changes in names are extensive, and some of them peculiar. Chemical nomenclaturists will be satisfied by the change of hydrobromates and hydrochlorates to the respective "ides"; asafœtida has changed its diphthong for an "e," "cre*a*sote" becomes "cre*o*sote," and pepsin becomes declinable in the form "pepsinum." The following is the complete list of the changes:—

Former Names, 1885 *or* 1890.	*Present Names*, 1898.
Adeps præparatus	Adeps
Æther purus	Æther purificatus
Alcohol ethylicum	Alcohol absolutum
Aloin	Aloinum
Apomorphinæ hydrochloras	Apomorphinæ hydrochloridum
Argenti et potassii nitras	Argenti nitras mitigatus
Asafœtida	Asafetida
Aurantii cortex	Aurantii cortex siccatus
Cascarillæ cortex	Cascarilla
Coca	Cocæ folia
Cocainæ hydrochloras	Cocainæ hydrochloridum
Creasotum	Creosotum
Cubeba	Cubebæ fructus
Decoctum granati radicis	Decoctum granati corticis
Ergotinum	Extractum ergotæ
Extractum belladonnæ	Extractum belladonnæ viride
Extractum hyoscyami	Extractum hyoscyami viride
Ferri arsenias	Ferri arsenas
Gelsemium	Gelsemii radix
Granati radicis cortex	Granati cortex
Homatropinæ hydrobromas	Homatropinæ hydrobromidum
Injectio ergotini hypodermica	Injectio ergotæ hypodermica
Ipecacuanha	Ipecacuanhæ radix
Jaborandi	Jaborandi folia
Limonis succus	Succus limonis
Lini farina	Linum contusum
Lini semina	Linum
Linimentum camphoræ compositum	Linimentum camphoræ ammoniatum
Linimentum iodi	Liquor iodi fortis
Linimentum sinapis compositum	Linimentum sinapis
Liquor ammoniæ fortior	Liquor ammoniæ fortis
Liquor cocainæ hydrochloratis	Injectio cocainæ hypodermica
Liquor ferri perchloridi fortior	Liquor ferri perchloridi fortis
Liquor morphinæ hydrochloratis	Liquor morphinæ hydrochloridi
Liquor plumbi subacetatis	Liquor plumbi subacetatis fortis
Liquor sodii arseniatis	Liquor sodii arsenatis
Liquor strychninæ hydrochloratis	Liquor strychninæ hydrochloridi
Mistura creasoti	Mistura creosoti
Morphinæ hydrochloras	Morphinæ hydrochloridum
Oleum sinapis	Oleum sinapis volatile
Pepsin	Pepsinum
Pilula asafœtidæ composita	Pilula galbani composita
Pyroxylin	Pyroxylinum
Quininæ hydrochloras	Quininæ hydrochloridum
Rhamni purshiani cortex	Cascara sagrada
Sodii arsenias	Sodii arsenas
Spiritus ammoniæ fœtidus	Spiritus ammoniæ fetidus
Strophanthus	Strophanthi semina
Syrupus rosæ gallicæ	Syrupus rosæ
Tabellæ nitroglycerini	Tabellæ trinitrini
Tinctura aurantii recentis	Tinctura aurantii
Tinctura chloroformi et morphinæ	Tinctura chloroformi et morphinæ composita
Tinctura rhei	Tinctura rhei composita
Tinctura sennæ	Tinctura sennæ composita
Trochisci bismuthi	Trochiscus bismuthi compositus
Trochisci (var.)	Trochiscus (var.)
Unguentum creasoti	Unguentum creosoti

We have already mentioned new synonyms for galenicals, and may add that "Milk of sulphur" is given as the synonym for sulphur præcipitatum, a concession to public analysts and drug purists, which housewives will not thank us for. As a rule changes in nomenclature have been made with circumspection. "Creosote" is in obedience to Dr. Charles Rice's classic research and our recommendation. "The substitution in chemistry of the term *hydroxide* for *hydrate* has been regarded as sufficiently established for the former to be generally adopted in the Pharmacopœia," so our familiar friend "slaked lime" is now "calcium hydroxide." We bow to the happy thoughtist, but would remind him that "calcium hydroxide" and CaO_2H_2 [used to be CaH_2O_2] are equivalents in pure chemistry, but in pharmacopœial chemistry "calcium oxide" is "calx," a substance which gives (according to the new B.P.) "reactions with the tests for iron, aluminium, magnesium, sodium, potassium, carbonates, chlorides, phosphates, sulphates, and silica" as well as calcium, therefore as "calcium hydroxide" is made from "calx" it cannot be merely CaO_2H_2, but it is, and must always be, "slaked lime." Such things as this make pure-chemistry nomenclature awkward for a Pharmacopœia which admits a degree of commercial impurity, and we think it would have been wiser to have broken the rule now and then. At the same time, we admit that it really does not matter what an article is called so long as one gets it as it should be. Constitutional formulæ are adopted for organic compounds. For example, in the case of phenyl-dimethyl-iso-pyrazoline we have it expressed as—



$$\begin{array}{ll} H_3CC & = CH \\ \vert & \quad \vert \\ H_3CN & \quad CO \\ \multicolumn{2}{c}{\diagdown\ \diagup} \\ \multicolumn{2}{c}{NC_6H_5} \end{array}$$

"Commonly known as 'antipyrine,'" says the footnote. Poor Minor men! But happily the B.P. is rather chary of these chain-formulæ, concentration being its strong feature. One of the most important alterations in nomenclature, from the business point of view, is the substitution of the terms "yellow beeswax" and "white beeswax" for "yellow wax" and "white wax." This meets the laundry-wax difficulty.

SPIRITUS AMMONIÆ AROMATICUS.

Aromatic Spirit of Ammonia.

Synonyms.—Spiritus Ammoniæ Compositus; Spirit of Sal Volatile.

	IMPERIAL	METRIC
Ammonium Carbonate	4 ounces	100 grammes
Strong Solution of Ammonia	8 fl. ounces	200 cubic centimetres
Oil of Nutmeg	$4\frac{1}{2}$ fl. drachms	14·1 cubic centimetres
Oil of Lemon	$6\frac{1}{2}$ fl. drachms	20·3 cubic centimetres
Alcohol (90 per cent.)	6 pints	3000 cubic centimetres
Distilled Water	3 pints	1500 cubic centimetres

Place the Oil of Lemon, Oil of Nutmeg, and Alcohol with the Distilled Water in a retort; distil seven pints (or three thousand five hundred cubic centimetres); then distil and separately collect an additional nine fluid ounces (or two hundred and twenty-five cubic centimetres.) Place the latter, together with the Ammonium Carbonate and the Strong Solution of Ammonia, in a bottle holding rather more than a pint (or rather more than half a litre); securely cork the bottle and gently warm it in a water-bath to 140° F. (60° C.), shaking from time to time until all the salt has dissolved. Filter the resulting solution when cold through cotton wool, and gradually mix the filtrate with the portion first distilled.

Characters and Tests.—A transparent liquid having a pungent ammoniacal odour and flavour; nearly colourless when first prepared, but liable to darken slightly. Specific gravity 0·888 to 0·893. 20 cubic centimetres require for neutralisation 25·5 cubic centimetres of the *volumetric solution of sulphuric acid*, corresponding to about 2·4 per cent. of ammonia (NH_3), or 2·16 grammes in 100 cubic centimetres. 20 cubic centimetres, after the addition of 16 cubic centimetres of *solution of barium chloride*, should yield

WEIGHTS AND MEASURES.

Before proceeding further we would call attention to a page of the Pharmacopœia, in order to illustrate how the Imperial and metric denominations are employed. We therefore quote page 305 (it is a whole page) in facsimile. It should be compared with page 379 of the 1885 edition.

It will be observed that metric terms solely are used in the "Characters and Tests." This is the rule throughout the book, all analytical quantitative processes whatsoever being measured in metric terms. Absolute equivalence between the Imperial and metric terms in the formulæ is not claimed. "Except for wholly insignificant fractional differences, a preparation made according to either system will contain the same proportions of ingredients." It is mentioned with regret that Imperial measures are standardised at 62° F., and metric ones at 39·2° F. The tables of weights and measures are given later on.

IMPERIALISM.

Taking the appendices in the order of their interest, the last one, Section XI., is an easy first, although it happens to be an anticlimax to a glorious conception. It is entitled "Alternative Preparations Sanctioned for use in India and the Colonies," and occupies three lines more than a page. So our Imperial Pharmacopœia is not yet. The General Medical Council, we are informed by the preface, have in contemplation the early preparation of an Addendum to embody fuller treatment of the suggestions made by medical and pharmaceutical authorities in India and the colonies, and they hope that that will take us a stage nearer to their ideal of the Imperial project. The inclusion of a few of the better tried of the articles of the materia medica of the Empire beyond the seas would not have greatly increased the labours of the committee, but we imagine that the difficulties have been greater than appear on the surface, and the absence from the committee of anyone personally acquainted with the conditions of colonial and Indian pharmacy may have encouraged delay. It would have been better to have delayed the whole thing. We get an example of the truth of the suggestion in the first paragraph, entitled "Adeps induratus." This is lard of the Pharmacopœia deprived of a portion of its oil by pressure, and it is permitted to be used when temperatures are so high that the ordinary lard would be too soft. This cannot apply to India, where lard is very little used, because caste prejudice precludes the use of anything of animal origin in any way by a large proportion of its population.

Aquæ anethi, anisi, carui, cinnamomi, fœniculi, menthæ piperitæ, menthæ viridis, and pimentæ are permitted to be made in India and other tropical countries by triturating the oils with calcium phosphate and water. This may pave the way to a similar method for home use.

Liquid extracts which contain less than one-fourth of their weight of alcohol (90-per-cent.) may be strengthened with alcohol to that amount where the preparation is likely to ferment in warm parts of the British Empire. Syrup rhœados similarly may be preserved with a proportion of alcohol (90-per-cent.) increased to not more than double that stated in the text. It is also provided that where fresh lemon-peel cannot be obtained, dried lemon-peel may be used in infusions and tinctures requiring it. There are few parts of India where lemons, which are grown largely in some of the Northern States, are not usually obtainable, and the same is true of Australasia and South Africa.

In suppositories it is recommended that more or less white beeswax, according to prevailing temperatures, may replace an equivalent amount of oil of theobroma. This looks like a useful provision, although with cacao-butter of good quality and B.P. melting-point it is seldom necessary, and it is sometimes difficult to avoid making, with the addition of wax, a suppository that will not melt at the normal temperature of the body, which happens in warm countries to be often below the shade-temperature; and if a thing does not melt in the shade, what will happen to it in the rectum?

Latitude is also given in the preparation of ointments in India and the colonies to vary the proportions of indurated lard, prepared suet, and yellow or white beeswax, as may be required to meet exigencies of temperature. This is what we understand is usually done in practice, although an alternative that would perhaps have been of more value to pharmacists in India would have been permission to make the pharmacopœial ointments with the new unguentum paraffini in instances where these animal products would be objected to. No objection exists, as far as we are aware, to lanolin, which, *plus* paraffinum durum, would have been an ideal Imperial basis.

Chemistry and Materia Medica.

It is impossible in a preliminary article to do full justice to the comprehensive changes which have been made in the chemistry or materia medica of the Pharmacopœia. It is doubtful, also, whether any detailed remarks on these sections can be useful until the Pharmacopœia is in the hands of all readers, but by a few examples we hope to convey a general idea of the improvements effected. The first page of the text is a good example to begin with. In the 1885 edition the whole of it is devoted to the preliminary title and acaciæ gummi. Now we have between the two the following paragraph:—

The names of substances defined in the text are printed with capital initial letters; those defined in the Appendix are printed in italics.

Following this is the monograph on acaciæ gummi, and here we observe that the list of "Preparations Containing Gum Acacia" is omitted and this applies to all similar lists in the Pharmacopœia, so that much space is saved, and at no great sacrifice—indeed, the only disadvantage that we can conceive is that the use of new things—*e.g.*, kaolin—is a little trouble to find out at first, but that is quickly got over. The characters and tests for acaciæ gummi, being fuller now, fill up the space that the list of preparations left vacant. The following contrast shows the changes that have been made.

Gum Acacia, 1885.	Gum Acacia, 1898.
1. *Bot. source.*—Acacia senegal, *Willd.*, &c.	1. *Bot. source.*—Acacia senegal, *Willd.* (A. Verek, *Guill. et Perr.*), &c.
2. *Form.*—Rounded, ovoid, or vermicular tears, &c.	2. *Form.*—Rounded or ovoid, &c.
3. *Colour.*—Colourless, yellow, brown, or red.	3. *Colour.*—Colourless, often with yellowish tint.
4. *Taste.*—Bland and mucilaginous.	4. *Taste.*—The same.
5. *Odour.*—Without odour.	5. *Odour.*—Nearly inodorous.

Gum Acacia, 1885.	Gum Acacia, 1898.
6. *Solubility.* — Insoluble in alcohol, entirely soluble in water forming clear solution.	6. *Solubility.*—Insoluble in 90-per-cent. alcohol, entirely soluble in water, forming translucent viscid solution, which feebly reddens litmus. Solution (1 to 1) should not be glairy nor yield deposit of gummy matter on mixing with more water.
7. *Tests.*—A. Subacetate-of-lead solution makes an aqueous gum solution into an opaque white jelly.	7. *Tests.*—A. Subacetate - of - lead solution makes opaque jelly.
B. Iodine does not strike a blue colour with the gum dissolved in boiling water and cooled	B. Borax solution, translucent white ditto.
	C. Lead-acetate solution, no precipitate.
	D. Iodine, no blue colour (absence of starch or dextrin).
	E. Ferric chloride, no bluish-black colour (absence of tannic acid).
	F. Fehling's solution, no red precipitate (absence of sugars).
	G. Not more than 4 per cent. of ash.

Gum acacia happens to be the first article, and, whether intentional or not we cannot say, but it strikes the keynote. Scarcely any article in the book has escaped revision in the paragraphs devoted to "Characters and Tests." Yet these show over-elaboration rarely, although they give explicit directions for crucial as well as simple tests.

The most important alteration is the relegation of all general tests to the appendix: the old method is, as it were, reversed; so that instead of detailing under "characters and tests" the reactions for identity and purity, the monographs state that the substances should give the tests for the bases and acids of which they are composed, and should not respond to the tests for other bases, acids, &c., with which they are liable to be contaminated. The tests are described in the appendix under a new section beginning Acetates.

The following examples show the style of revision in special instances:—

Aconitine, 1885.	*Aconitine*, 1898.
Process given.	*No process.*
An amorphous solid. Melts when heated. Burns with smoky flame. No residue.	Crystalline. Melting-point, 372·2° to 374° F. (189° to 190° C.). Above this temperature yields acetic acid.
Soluble in 150 parts of cold and 50 parts of hot water. Much more soluble in alcohol, ether, and chloroform.	Soluble in alcohol and chloroform, less soluble in ether, and nearly insoluble in water and petroleum ether.
Precipitated from solutions of its salts by the caustic alkalies, but not by ammonium carbonate or sodium and potassium bicarbonate.	Dilute solution in weak acetic acid deposits a red crystalline powder on addition of a few drops of potassium-permanganate solution.
Rubbed on the skin causes tingling sensation.	Solutions produce tingling on the tongue.

The melting-points of the hydrochloride and hydrobromide are also given under Aconitine.

All other alkaloids have been carefully revised, and Mr. David Howard's recommendations *re* quinine sulphate are adopted.

A good example of another type of chemical is the following :—

Amyl nitrite, 1885.	*Amyl nitrite*, 1898.
Ethereal yellow liquid.	Ethereal yellow liquid.
Peculiar, not disagreeable odour.	Fragrant odour.
Sp. gr. 0·880.	Sp. gr. 0·870.
	Slightly acid.
Insoluble in water.	Insoluble in water.
Soluble in alcohol.	Soluble in alcohol.
Added drop by drop to fused KHO, valerianate formed.	Added drop by drop to fused KHO, isovalerianate formed.
	Seventy-per-cent. distils between 194° and 212° F. A 5-per-cent. solution in alcohol yields six times its bulk of nitric oxide.
	With equal volume of KHO solution only a pale yellow colour produced.
	A little in a test-tube placed in iced water should remain transparent.

In the following we have used symbols to save space.

Glycerine, 1885.	*Glycerin*, 1898.
Source.—Obtained by reaction of alkalies and fats or fixed oils.	*Source.*—Obtained by interaction of alkalies or superheated steam on fats and fixed oils.
Characters.—Clear, colourless fluid, oily to the touch. Without odour. Sweet. Soluble in water and alcohol. "When decomposed," &c. Sp. gr. about 1·25.	*Characters.* — Clear, colourless, syrupy liquid; inodorous. Sweet. Miscible with water and alcohol (90-per-cent.). Insoluble in ether, chloroform, and fixed oils. Absorbs moisture from air. "When decomposed," &c. Sp. gr. 1·260.
Tests.—Neutral to litmus. Solution not affected by $AgNO_3$, Am_2S, AmOx, and $BaCl_2$. Only slight straw-colouration with H_2SO_4. No rancid odour on heating with H_2SO_4 dil.	*Tests.*—Neutral to litmus. Should not give reactions for Pb, Cu, As, Fe, Ca, K, Na, Am, Cl, and S. Does not reduce Fehling's solution. Does not darken with AmHO and $AgNO_3$. Only slight colouration with H_2SO_4. Heated with alcohol and H_2SO_4 dil. no fruity odour (absence of butyric acid). Arsenium limited by Zn + HClaq, and mercuric-chloride-paper not stained yellow by the hydrogen. No ash.

The extension of testing to essential oils must have involved a tremendous amount of labour which is not reflected by the Pharmacopœia monographs.

As this section of the work is of immediate interest to many dealers, we give here in tabular form the principal physical tests to which essential oils and fixed oils must conform :—

Essential Oils.

Oleum	Sp. Gr.	Opt. Rot. of 100 mm.	Solubility in Alcohol (70 per cent.) (In Volumes)
Anethi ...	0·905 to 0·920	+ 70°	—
Anise * ...	0·975 to 0·990	slightly —	—
Anthemidis	0·905 to 0·915	—	—
Cajuputi ...	0·922 to 0·930	—	—
Carui ...	0·910 to 0·920	—	—
Caryophylli	Not below 1·050	—	—
Cinnamomi	1·025 to 1·035	—	—
Copaibæ ...	0·900 to 0·910	To the left	In its own volume of absolute alcohol†
Coriandri ...	0·870 to 0·885	—	1 in 4
Cubebæ ...	0·910 to 0·930	—	—
Eucalypti ‡	0·910 to 0·930	+ or — 10°	—
Juniperi ...	0·865 to 0·890	—	1 in 4 (equal parts of absolute alcohol and 90-per-cent. alcohol)

Oleum	Sp. Gr.	Opt. Rot. of 100 mm.	Solubility in Alcohol (70 per cent.) (In Volumes)
Lavandulæ	Not below 0·885	—	1 in 3
Limonis §...	0·857 to 0·860	+ 59°	—
Menthæ piperitæ ‖	0·900 to 0·920	—	1 in 4
Menthæ viridis	0·920 to 0·940	—	1 in 1 (in equal parts of absolute alcohol and 90-per-cent. alcohol)
Myristicæ...	0·870 to 0·910	—	1 in 2 (in equal parts of absolute alcohol and 90-per-cent. alcohol)
Pimentæ ¶	Not below 1·040	—	—
Pinus pumilio	0·865 to 0·870	5° to 10° –	—
Rosæ ** ...	0·856 to 0·860	—	1 in 2 of 90-per-cent. alcohol
Rosmarini	0·900 to 0·915	Not more than + 10°	—
Santali ...	0·975 to 0·980	– 16° to 20°	1 in 6
Sinapis volatile	1·018 to 1·030	—	—

* Sp. gr. taken at 68° F. All others are taken at 60° F, except where otherwise stated.

† Distinction from African copaiba oil.

‡ Becomes semi-solid when mixed with a third of its weight of phosphoric acid, sp. gr. 1·750. Oils containing phellandrene excluded by glacial acetic acid 2 c.c., and saturated sodium-nitrite solution 2 c.c., not forming crystalline mass with 1 c.c. of oil.

§ Fractionate 100 volumes. The first 10 volumes of distillate should not differ from the original oil by more than 2° in rotation.

‖ Should yield crystals when cooled to 17° F. and a few menthol crystals added.

¶ The oil should be converted into a semi-solid mass when shaken with an equal volume of strong solution of ammonia

** The congealing and melting points of otto of rose are given as between 67° and 72°, according to the proportion of crystalline matter.

Fixed Oils.

—	Specific gravity	Solubility
Amygdalæ (*a*)...	0·915 to 0·920	In ether and chloroform in all proportions
Cadinum ...	About 0·990	In ether and chloroform in all proportions; partially in cold, almost wholly in hot, alcohol (90 per cent.)
Crotonis (*b*) ...	0·940 to 0 960	Entirely in absolute alcohol; freely in ether and chloroform
Lini	0·930 to 0·940	In 10 of 90-per-cent. alcohol, and in oil of turpentine
Morrhuæ (*c*) ...	0·920 to 0·930	Readily in ether and chloroform; slightly in 90-per-cent. alcohol
Olivæ (*d*) ...	0·914 to 0·919	—
Ricini (*e*) ...	0·950 to 0·970	In an equal volume of absolute alcohol, and in 5 vols. of 90-per-cent. alcohol

(*a*) HNO_3 test for detection of peach-kernel and other fixed oils.

(*b*) HNO_3 test for other non-drying oils.

(*c*) A new test is introduced for cod-liver oil. If nitric acid is carefully poured into some of the oil contained in a test-tube, a precipitate of coagulated albumen should form at the surface of contact of the two liquids. We presume that this is intended to demonstrate whether the oil is a fish-oil, and whether it has been bleached, as the albuminous constituents are destroyed on bleaching. No solid fat should separate. The oil should also not deposit solid fat after exposure for two hours at 32° F.

(*d*) The test for cotton-seed oil in olive oil is the one generally known in this country as Conroy's.

(*e*) For castor oil the carbon-bisulphide and sulphuric-acid tests is given for the detection of other fixed oils and cotton-seed oil. The absence of other fixed oils is also established if equal volumes of the oil and petroleum spirit remain clear if kept at 60° F.

Oleum Terebinthinæ is given as soluble in its own weight of glacial acetic acid. It should commence to boil at 320° F. and should almost entirely distil below 356° F., little or no residue remaining.

Oleum Theobromatis is not now described as "of the consistency of tallow." The melting-point is given as 88° to 93° F. (formerly 86° to 95°). The absence of stearin and other fats is provided for in a test which is given. A solution in ether contained in a test-tube is placed in water and should not become turbid nor deposit a granular mass in less than three minutes.

* * * *

Processes of preparation are, with few exceptions, discarded, a brief paragraph sufficing to show the origin of each chemical substance. The nature of these paragraphs is generally similar to that for arsenii iodidum in the present Pharmacopœia. Recipes of the chloroform type are discarded. This change is not quite new, because the chemicals introduced into the 1835 edition were described in the brief manner, and the recipes were retained for no other reason, apparently, than respect for the ancient. Sentiment now gives way to uniformity, and the fact is at last completely recognised that the pharmacist is not a chemical-manufacturer, and that those who make medicinal chemicals do not go to Pharmacopœias for their processes, but for the characters and tests to which the products should conform.

From an educational point of view, the change is perhaps a disadvantage. The Minor student will not learn much from the reiteration of the statement that substances are prepared "by the interaction" of one thing on another; but the Pharmacopœia is not a chemistry text-book. Nor is it from that work that the apprentice should learn how to make calcii hydras and the like. Still, some chemists prefer to make, for instance, their own hydrocyanic acid, for a process for which the Pharmacopœia would be about as convenient a reference as it is for the preparation of sulphurated antimony, the formula for which is retained for no other reason than the extreme complexity of the "molecule." Solubilities and melting-points are given in much fuller detail than in the last edition.

Taking a broad view of the new testing of chemicals as a whole, we feel entitled to say that most of the criticisms of the past dozen years have been well met, and the charge so frequently made against B.P. standards, that they savour too much of the "about," has also been met by greater precision.

There is another side to the matter, however—viz., that in many instances the directions for testing are complex, and occasionally require conditions of purity which are not attainable on the commercial scale without great cost. The compilers seem, in fact, to have relied too much upon collegiate researches, rather than upon the actualities of a market wherein quality is kept up by competition.

As already stated, we shall deal in an early issue with the botany and materia medica of the new Pharmacopœia. These incorporate the wisdom of Bloomsbury Square and Kew Gardens, while the Kew nomenclature is generally adopted, Bloomsbury not yet having risen to that distinction.

The Appendices.

That important section of the Pharmacopœia which contains the articles not used medicinally and general directions for testing medicines, formerly called the "Appendix," now "Appendices," is divided into eleven sections. It begins on page 391, and in what goes before there are eighty-three fewer pages than in the 1885 B.P. We take that to be, from the editorial point of view, the best evidence of careful workmanship. To put more stuff into less space is good business. The compilers have succeeded in doing it by many sacrifices, such as deletions and, chiefly, omissions of the lists of preparations into which chemicals and drugs enter. This omission is compensated for by including in the index under the English name of each crude article the preparations thereof, which, however, is not new.

The First Appendix is devoted, as formerly, to "Articles Employed in Chemical-testing." The order of the substances differs on account of the fact that the genitival style in English pharmacopœial titles is, as already mentioned, changed to the adjectival. "Acetate of sodium" is now "sodium acetate." Apart from new substances, others formerly included in the first or medicinal portion of the Pharmacopœia are now placed in the appendices—*e.g.*, albumen, "the liquid white, separated from the yolk of the egg of Gallus Bankiva, *var.* domesticus, *Temminck.*" This covers the yolk which occurs in the formula for mist. spt. vini gallici. There is little of a strictly novel character in Appendix I. to call for comment. The testing-chemicals are more numerous. Some testing-preparations are included in Appendix I.—*e.g.*, morphinated water, for use in opium assaying, milk of lime, and mucilage of starch.

Appendix II. is devoted to test-solutions. We are surprised to find the formula retained for making solution of auric chloride from gold-leaf. Auric chloride is as easily obtainable as washing-soda. A formula for Fehling's solution is introduced, viz.:—

No. 1.

Copper sulphate, in crystals ...	34·64 grammes
Sulphuric acid	0·5 c.c.
Distilled water, sufficient to produce...	500 c.c.

Dissolve.

No. 2.

Sodium potassium tartrate ...	176 grammes
Sodium hydroxide	77 "
Distilled water, sufficient to produce...	500 c.c.

Dissolve.

Mix equal volumes of the solution No. 1 and No. 2 at the time of using.

Appendix III. comprises "Tests for Substances mentioned in the text of the Pharmacopœia." The following is an example:—

CITRATES.

Citrates become charred when heated.

Solution of Sodium Chloride added in excess affords, when boiled with a neutral solution of a citrate, a white precipitate, insoluble in *solution of potassium hydroxide*, but soluble in *solution of ammonium chloride*, and in solutions of alkaline citrates.

Solution of Silver Nitrate causes in solutions of neutral citrates a white precipitate soluble in *solution of ammonia*. A mirror is not formed on the sides of the tube when the ammoniacal solution is warmed (distinction from tartrates).

We call that very nice. There is nothing in the new B.P. so thoroughly good for students of pharmacy as Appendix III.

Appendix IV.—"Test solutions for volumetric estimations" occupy this section. The compilers have been good enough to repeat the pedagogic directions respecting the flask, cylindrical jar, and burette which were inserted when volumetric analysis was a matter of "decims"; but the critically inclined will please look closely into the matter. The flask is to contain 1,000 grammes of water at 60° F., and is to be marked "1-litre flask"—a litre really is the measure of 1,000 grammes of water at 4° C. (39·2° F.). The cylindrical jar is also to be marked so, and the 50-gramme burette is to be divided at 60° F. into fifty equal parts, each to be marked 1 c.c., and each of these divided into ten equal parts. These directions justify the descriptions of apparatus, and the compilers have been careful to explain how the matter stands in a small-type paragraph which is a remarkable mental exercise. The plain fact is, a true *cubic centimetre* is the volume of 1 gramme of water at 4° C., a B.P. cubic centimetre is the volume of a gramme of water at 15·5° C. The B.P. one is the better because most volumetric operations are conducted at or near 15·5° C.

Grain measures and things like that are now excluded from volumetric tests, which have all to be done by the metric methods. The following are the standardised solutions which are recognised:—

Potassium-bichromate Solution.—This was formerly decinormal of Fe''_3. Now it is a true decinormal solution, and is made by dissolving 4·87 grammes in sufficient water to make 1,000 c.c., the strength of the solution being checked with pure ferrous ammonium sulphate

Silver-nitrate Solution.—Still decinormal, but, owing to notions regarding atomic values having changed lately, 16·869 grammes instead of 17 grammes of the nitrate has to be taken for 1,000 c.c. The solution is to be verified with pure sodium chloride or solution of pure hydrochloric acid of known strength. We think the "16·869" a trifle pedantic. It is not operations such as the determination of atomic weights that chemists and druggists have to perform, but to determine the approximate strengths of medicines.

Sodium-hydroxide Solution.—Forty-two grammes of purified sodium hydroxide is dissolved in 1,000 c.c. of water, and the solution standardised with normal sulphuric-acid solution to contain 39·76 grammes of NaOH per 1,000 c.c.

Sodium-thiosulphate Solution.—A decinormal solution made in the same manner as "volumetric solution of hyposulphite of sodium," 1885.

Sulphuric-acid Solution.—A normal solution which replaces the oxalic-acid solution of the 1885 B.P. Made by diluting 50 grammes sulphuric acid with water 900 c.c., and standardising with sodium carbonate freshly made from the bicarbonate. It is mentioned that a *decinormal* solution may be made by appropriate dilution, this being the first official mention of "normal" terms. We also note the term "1·053 gramme," which indicates that the plural number, in the opinion of the Pharmacopœia compilers, lies somewhere between that and "1¼" (in pil. scillæ co. "1¼ ounces" of squill is ordered).

The indicators recommended are mucilage of starch, potassium-ferrocyanide solution, litmus solution, methyl-orange solution, phenolphthalein solution, and neutral potassium-chromate solution. General directions are given in respect to each, but no list of substances with which they may be employed as in the 1885 work.

Appendix V. is the atomic weights table. We combine it and the 1885 one so as to show the differences:—

NAMES, SYMBOLS, AND ATOMIC WEIGHTS OF THE ELEMENTARY BODIES MENTIONED IN THE BRITISH PHARMACOPŒIA:—H = 1·00.

Names	Symbols	Atomic Weights	
		1885	1898
Aluminium	Al	27	26·90
Antimony	Sb	120	119·00

Names	Symbols	Atomic Weights 1895	Atomic Weights 1898
Arsenium	As	75	74·50
Barium	Ba	137	136·40
Bismuth	Bi	209	207·30
Boron...	B	11	10·85
Bromine	Br	80	79·35
Calcium	Ca	40	39·71
Carbon	C	12	11·91
Cerium	Ce	141	139·20
Chlorine	Cl	35·5	35·19
Chromium	Cr	52·5	51·74
Copper	Cu	63·4	63·12
Gold	Au	196·5	195·70
Hydrogen	H	1	1·00
Iodine	I	127	125·90
Iron...	Fe	56	55·60
Lead	Pb	207	205·35
Lithium	L	7	6·97
Magnesium	Mg	24	24·18
Manganese	Mn	55	54·52
Mercury	Hg	200	198·80
Nitrogen	N	14	13·94
Oxygen	O	16	15·88
Phosphorus	P	31	30·80
Platinum	Pt	195	193·30
Potassium	K	39	38·83
Silver	Ag	108	107·11
Sodium	Na	23	22·88
Sulphur	S	32	31·82
Tin	Sn	118	118·20
Zinc	Zn	65	64·91

Appendix VI. is devoted to thermometric memoranda. Here we learn that thermometers employed in taking specific gravities, melting-points, and boiling-points should be compared with a standard thermometer, their errors corrected, and their zero-points occasionally verified. Then follow directions for taking melting-points by the capillary-tube method, and for the correction of temperature when the whole of the mercury-column is not immersed. In telling how boiling-points should be determined it is mentioned that the bulb, passed through the cork of the distilling-flask, "should be near to, but not immersed in, the liquid." Correction for unimmersed mercury-column has to be made if the whole is not surrounded by vapour.

Appendix VII. comprises weights and measures. The following are the new points:—

1·00016 cubic centimetres = 1 millilitre.
1·00016 cubic decimetres = 1 litre or 1,000 millilitres.

Strange: "1·053" is singular, but "1·00016" is plural!

The relations of the metric standards to the Imperial standards are altered in accordance with the decision arrived at by the Board of Trade in conference with the International Bureau. We give the standards as in the 1885 B.P. and the 1898, so that differences may be seen, and because the latter have not yet been approved by Order in Council. Until they have been, it will not be possible to obtain verified metric weights and measures for use in trade:—

Standards of Mass.

	1885 grammes	1898 grains
1 pound =	453·5927 =	453·59243
1 ounce =	28·3495 =	28·34953 or 28·35 nearly
1 grain =	0·0648 =	0·064798918 or 0·0648 nearly

Standards of Capacity.

	1885 litres	1898 litres
1 gallon	= 4·543458 =	4·5459631
1 pint	= 0·567932 =	0·5682454 or 568·336 c.c. nearly
1 fluid ounce	= 0·028397 =	0·0284123 or 28·417 c.c. nearly
1 fluid drachm	= 0·003550 =	0·003552 or 3·552 c.c. nearly
1 minim	= 0·000059 =	0·000059 or 0·059 c.c. nearly

Standards of Length.

1898 only.

1 yard = 0·914399 metre
1 foot = 0·30480 ,, = 30·48 centimetres
1 inch = 0·02540 ,, = 25·40 millimetres

RELATION OF THE METRIC STANDARDS TO THE IMPERIAL STANDARDS.

Standards of Mass.

	1885 grains	1898 grains
1 milligramme =	0·015432 =	0·015 nearly
1 centigramme =	0·15432 =	0·154 nearly
1 decigramme =	1·5432 =	1·543 nearly
1 gramme =	15·432 =	15·4323564
1 kilogramme =	15432·349, or 2 lb. 3 oz. 119·8 gr. =	15432·3564, or 2 lb. 3 oz. 119·8564 gr.

	1885	1898
1 cubic centimetre =	15·432 gr. =	16·95 minims nearly
1 litre	= 1·76077 pint =	1·75980 pint, or 1 pint 15 fl. oz. 1 fl. dr. 34 m. nearly

Standards of Length.

	1885 inches	1898 inches
1 millimetre =	0·03937 =	0·039370
1 centimetre =	0·39371 =	0·39370
1 decimetre =	3·93708 =	3·9370
1 metre	= 39·37079, or 1 yard 3·37 ins. =	39·370113 ins. or 1 yd. 3·37 ins. nearly

Appendix VII. is taken up with the general directions about tinctures, which have already been summarised (p. 623), and IX. is about lozenges (see p. 616). X. is a "list of books referred to, containing plates of botanical plants" (an archaic device which botany no more deserves than chemistry for the figure of a particular crystal). Appendix XI. is the Imperial part.

INDEX AND POSOLOGY.

An index which takes up almost a fourth as much space as the matter which it deals with is something new. That is what the new Pharmacopœia index is. It is a four-column affair, the first column being devoted to names, the second to pages, the third to doses, and the fourth to strengths. It is very elaborate—almost too much of a good thing—but it will undoubtedly be well appreciated by medical practitioners and by students: by practitioners because they have only to turn to it when they want to know what are the official forms of any drug. Here are examples:—

Name	Page	Dose	—
Hyoscyamus-leaves...	153	—	—
— green extract of ...	114	2 to 8 gr.	—
— juice of	316	½ to 1 fl. dr.	—
— tincture of ...	350	½ to 1 fl. dr.	—
Hyoscine hydrobromide ...	153	$\frac{1}{200}$ to $\frac{1}{100}$ gr.	—
Hyoscyamine sulphate... ...	154	$\frac{1}{200}$ to $\frac{1}{100}$ gr.	—
Indian hemp... ...	65	—	
— — extract of ...	105	¼ to 1 gr.	—
— — tincture of ...	340	5 to 15 ♏	5 gr. of extract in 110 ♏ (5 grammes in 100 c.c.)

We cannot explain why the strengths of some tinctures are given and others not. The example, however, shows how serviceable the index will also be to students, who must learn such data as are included in it by rote. We have already referred to the various methods by which the doses of more or less allied preparations have been made uniform.

HOW WILL THE BOOK BE RECEIVED?

The first edition of the British Pharmacopœia was received with a storm of execration from pharmacists and a somewhat milder protest from medical men. Looking back upon that time, nearly five-and-thirty years ago, it is difficult to realise that one of the most trenchant pharmaceutical critics was the gentleman who has acted as editor of the 1898 edition—viz., Dr. John Attfield, F.R.S. As the lieutenant of Professor Theophilus Redwood, who led the pharmaceutical attack, Dr. Attfield devoted his criticism chiefly to the chemistry of the Pharmacopœia. The immediate result of the attack was the withdrawal of the 1864 edition, and the appointment of Professor Redwood to act along with the late Mr. R. Warington, F.R.S., as editor. It happened, therefore, that when the 1867 edition was published the criticism passed upon it was mild. It could not have been otherwise: the critics had been silenced by making them the constructors, and not until the 1885 edition had we anything like a return to the 1864 state of things. Then the pharceutical camp was decidedly in a good state for criticism. The Pharmaceutical Council had taken up a strong position respecting Pharmacopœia revision—virtually declined to assist the General Medical Council in the work for the 1885 edition, and tried to move Parliament by petition to recognise the ability and the right of pharmacists to engage in the work. Meanwhile the Society's three professors—Redwood, Bentley, and Attfield—were quietly entering into an engagement with the General Medical Council to act as editors of the forthcoming work. In these circumstances it was, perhaps, natural that the drug-trade should receive the book with a suspicion of asperity. At all events, from the moment that Mr. J. B. Stephenson, in his capacity as President of the British Pharmaceutical Conference at Aberdeen, uttered the first public comment on the 1885 B.P. up to the eve of the publication of the 1898 one, criticism has flowed continuously.

The sentiment has again changed. The appointed representatives of English and Scotch pharmacy have been engaged in the revision, and the trade must, in a sense, look upon it as their own work. Will they do so and keep silence? We think not. Irish pharmacy was left out in the cold, and has to be reckoned with. Indian and colonial pharmacists had their hopes strung high, and the Imperialism of the book is too feeble to incite response from them. And as to Great Britain, the experience of 1885-1898 is that criticism from the rank-and-file of the trade is what most affects Pharmacopœias. In the rank-and-file sentimental regard for the work of the leaders counts for little. It is already an open secret that the strong men of the Pharmaceutical Society's B.P. Committee are not over delighted with the work. But, apart from all such considerations, the fact remains that the British Pharmacopœia, 1898, is in many respects disappointing—merely because we have been led to to expect so much. How true is the adage "Blessed is he who expecteth little, for he will not be disappointed."

NOTE.

THIS review and criticism will be reprinted in pamphlet form, and a copy of it will be enclosed in each copy of the British Pharmacopœia, 1898, supplied by us to subscribers (8*s*. per copy post-free). Chemists and druggists who wish to supply copies of the pamphlet to their medical friends may obtain them at the rate of 2*s*. 6*d*. per dozen post-free.

"WINNOWED SULPHUR" is the name given to a finely-divided form of flowers of sulphur adapted for use in vineyards. It is blown on the vines by means of bellows.

New Companies and Company News.

ANGLO-EGYPTIAN PETROLEUM COMPANY (LIMITED).—Capital 125,000*l*., in 1*l*. shares. Objects: To carry on the business of borers and miners for and refiners and distributors of petroleum, rock oil, coal oil, and hydrocarbons, &c.

NETTLETON, WOOLLEY & CO. (LIMITED). — Capital 5,000*l*., in 1*l*. shares (1,500 preference). Objects: To acquire and carry on the businesses of "J. & W. S. Nettleton" and "Woolley & Co.," mineral and aërated water manufacturers, Southport.

WILLIAM HODGKINSON (LIMITED).—Capital 4,000*l*., in 1*l*. shares. Objects: To acquire and carry on the business of an aërated and mineral water manufacturer carried on by Wm. Hodgkinson, at 45 West Street, Fleetwood, Lancs. Registered office, 45 West Street, Fleetwood.

QUICKSILVER MINES (CALIFORNIA, U.S.A.) (LIMITED).—Share capital 150,000*l*., half in 8-per-cent. cumulative preference, half in ordinary shares of 1*l*. each. It is intended to buy and develop the Redington Quicksilver Mine, Napa County, California. The vendor asks 125,000*l*. for the property, 15,000*l*. of it in cash.

TAKAMINE SYNDICATE (LIMITED).—Capital 5,000*l*., in 1*l*. shares. Objects: To acquire certain patents granted to Jokichi Takamine, a native of Japan, for improvements in the production of alcoholic liquors, and to carry on the business of manufacturing and analytical chemists, distillers, rectifiers, diastase-manufacturers, maltsters, &c.

DOUGLAS SINCLAIR & CO. (LIMITED).—Capital 50,000*l*., in 5 000 ordinary shares of 1*l*. and 4,500 preference shares of 10*l*. each. Objects: To adopt an agreement with Douglas F. Sinclair, Radcliffe Ward and Francis E. D. Acland, and to carry on the business of electro-chemical manufacturers, electricians, engineers, &c. Registered office, 76 Cheapside, E.C.

AKTIEN GESELLSCHAFT FÜR ANILINFABRIKATION IN BERLIN.—The report of this company for 1897 shows a gross profit of 1,132,178m., which is fully 65 000m. less than in 1896. After paying directors' fees, and placing sums to the reserve and benefit funds, it is proposed to pay a dividend of 12½ per cent, which will absorb 625,000m.

FARBENFABRIKEN VORM. FRIEDR. BAYER & CO., ELBERFELD.—The report of the directors of this company for the year ending April 8 shows gross profits amounting to 3,171,989m., out of which a dividend of 18 per cent. is recommended, which will absorb all but 829,103m., which is passed to the reserve and otherwise appropriated. The meeting of the shareholders will be held on May 4.

ROSBACH SPRINGS (LIMITED).—The report for the year ending December 31 last states that the consumption of the water continues to show a steady improvement, the deliveries being upwards of 75 per cent in excess of last year. The profit-and-loss statement exhibits a debit of 482*l*. The company have completed arrangements for the agency of Rosbach in America, this being the largest market of the world for the sale of natural sparkling water. The superiority of Rosbach is acknowledged in the United States, and important sales are now being effected, which it is confidently anticipated will result in further extended business. In July last an issue of 20,000 shares at par was made, thus providing the company with ample funds.

LEWIS & BURROWS.—The *Critic*, in commenting on proposals "to acquire a miscellaneous assortment of retail businesses," states that the results of such experiments have not been encouraging. "In the majority of cases the companies have been over-capitalised to begin with, and too much has been paid for the businesses acquired. Next, the directors have not generally been conspicuous for their knowledge of the trade, and it has still to be demonstrated that the joint-stock company, with all its advantages, can buy better than the small trader, who has a more direct interest in making the best bargain possible than the paid servant of an incorporeal body of shareholders. Moreover, a joint-stock company never is, and never can be, managed so economically as a private firm." Lewis & Burrows' Drug Stores (Limited) are quoted as an example, and the following summary of the history of this company is given: "The capital was fixed at 100,000*l.*, in 30,000 6-per-cent. preferred shares. 69,900 ordinary shares, and 100 deferred shares of 1*l.* each. Of these, 25,000 preference, 49,900 ordinary, and all the deferred shares have been issued. The prospectus set out a list of the businesses to be acquired, a valuation of which showed that the assets amounted to something over 17,000*l.* No proper statement of profits was ventured upon, but for 1894 they were put down at 7,552*l.*, and a further profit of 1,750*l.* was estimated on two additional businesses to be acquired. On this flimsy basis the vendors fixed the purchase-price at 65,900*l.*, and in order to give the public a big share in such a promising enterprise, kindly offered to take 33,900*l.* of it in cash. They also took all the deferred shares (100), which were to receive half the profits after 10 per cent. had been paid in each year to the ordinary, to show their complete confidence in the venture. Now for the results. In August, 1895, an interim dividend at the rate of 10 per cent. per annum was declared, possibly to facilitate the process of unloading the vendors' shares. At any rate, it is quite evident the distribution was not justified, for at the end of the year the preference dividend could only be paid with a struggle, and the ordinary shares got nothing further. The year 1896 ended yet more disastrously. Instead of the estimated profit of over 9,200*l.*, the net result was a miserable 1,020*l.*, and the preference shareholders had to be content with 4 per cent. instead of 6 per cent. Now we have the results for 1897, and although they show a considerable improvement they cannot be regarded as particularly brilliant. The company has seventeen shops, out of which a net profit of 2,400*l.* has been made, or not quite an average of 150*l.* a year each. However, it allows the arrears of preference dividend to be wiped out, and the new year is started with a clean sheet and 312*l.* in hand."

Personalities.

SIR SAMUEL WILKS has been re-elected President of the Royal College of Physicians of London.

MR. W. E. SMITH, of the firm of W. E. Smith & Co., chemists, of Madras, is expected in London in May.

SIR WILLIAM TURNER, F.R.S., the new President of the General Medical Council, has been elected a corresponding member of the Berlin Academy of Sciences.

MR. WILLIAM MAIR, who for several years has been on Messrs. Smith, Stanistreet & Co.'s pharmaceutical staff in Calcutta, is now in London making arrangements for starting business on his own account in Calcutta, where premises in one of the leading thoroughfares in the city are now being built for him. Letters for him may be addressed to our office.

MR. ALEX. CUNNINGHAM, who for nearly nine years has been with Messrs. Dakin Brothers, London, is proceeding to Edinburgh to act as accountant to Messrs. Raimes, Clark & Co., Smith's Place. Mr. Cunningham succeeds the late Mr. Duff, and will take charge of the office. Before coming to London Mr. Cunningham was for fourteen years with Messrs. Sang & Barker, Edinburgh.

Business Changes.

MR. HAROLD, of Guernsey, writes to contradict the statement that he has sold his business to Messrs. Boots. We said he had sold his shop. Was not that correct?

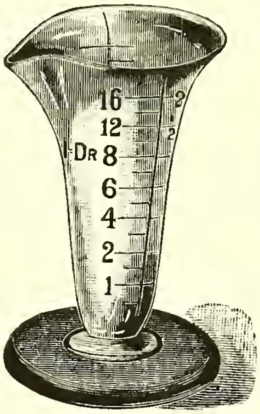
MR. ROBERT J. IBISON, of Carnforth, has purchased the business lately owned by Mr. John Chambers Gibson, at 500 Barnsley Road, Fir Vale, Sheffield.

MR. GEO. LE SEELEUR has opened a pharmacy at 16 King Street, St. Helier, Jersey, premises till recently occupied by Mr. Robert Inglis (formerly of Todmorden), who is now at the local branch of Messrs. Boots, Cash Chemists (Western) (Limited), 25 Queen Street.

Trade Notes.

MR. C. GERRING calls our attention to a slight error in his article on "Acetylene-gas" in last week's *C. & D.* (page 385). The burners he uses are not "Number 5," as stated, but five 00000, burning about half a cubic foot per hour.

A PROTECTED MEASURE.—Mr. A. B. V. Taffs has patented an arrangement for preventing the breakage of glass measures in which the foot is the vulnerable point. The protector consists of an indiarubber pad, which is placed in a flexible rubber purse, into which the foot of the measure is inserted, as shown in the illustration. The device is perfectly effectual, and we doubt not that the protector will long outlive the first measure to which it is applied, which is an advantage. The protectors are made by Messrs. H. Gilbertson & Son (Limited), St. Andrew's Hill, E.C., from whom they may be obtained.



SUMMER DRINKS.—Messrs. Deighton & Smith, Bridgnorth, remind us that the summer is at hand by sending us samples of their "Crystallised Ripe-fruit Juices." The crystals are put up in white-glass bottles of square shape, which show up the contents nicely. Each flavour has its distinctive tint, making them adapted for counter or window displays. Messrs. Deighton & Smith mention the case of a chemist in a small town who sold between 900 and 1,000 bottles last year, as a result of a good counter-show. The flavours of the kinds we have examined are really delicious, and as each bottle has a guarantee of purity attached—given the necessary hot summer and enterprising chemist—large sales may be anticipated this season. The bottles sell at a minimum price of 4½*d.*, and at this yield a good living profit. Carriage, we notice, is paid on half-gross lots and upwards to all parts of the kingdom.

Wills of Deceased Chemists.

The will of Mr. William Kilvington, chemist and druggist, Ashton-under-Lyne, who died on June 2, is proved by his widow and sole executrix, Mrs. M. B. Kilvington, by whom the testator's personalty is sworn at 151*l.* 16*s.*

The will of Mr. W. P. Hoare, chemist and druggist, Cromer, a member of the local School Board and Urban Council, who died on August 31, is proved by his widow, Mrs. Mary Hoare, by whom the testator's gross personalty is sworn at 1,582*l.* 17*s.* 4*d.*

The will of the late Mr. Thos. Robinson, chemist and druggist, of North Ormsby, Yorkshire, has been proved in London by Mrs. J. A. Robinson, the widow, and Messrs. E. J. Smith and C. E. Morton, the executors, by whom the testator's personalty is sworn at 416*l.* 8*s.*

The will of Mr. Roberts Jackson, chemist, 2 Stratford Square, Nottingham, who died on December 6, is proved by Mr. E. D. Jackson, the son, and Mr. J. B. Coleman, 371 Berridge, Road, Nottingham, the executors, by whom the testator's gross personalty is sworn at 277*l.* 9*s.* 2*d.*

"SANITAS"
EMBROCATION
in bottles to retail at
8d., 1/-, and 2/6.
"SANITAS"
AND OTHER
DISINFECTANTS
SULPHUR FUMIGATING CANDLES (Patent)
6*d.*, 9*d.*, and 1/- each.
PRESERVED PEROXIDE OF HYDROGEN (Patent).
MOTH PAPER, BLOCKS AND CRYSTALS.
WEED DESTROYER, &c. &c.

THE SANITAS CO., LIMITED, BETHNAL GREEN, LONDON.
AND 636-642 W. 55 STREET, NEW YORK.

JEWSBURY & BROWN'S
SODA-WATER,
Lemonade, Ginger Ale,
BREWED GINGER-BEER,
&c., &c.

Manufactory—ARDWICK GREEN, MANCHESTER

THE FAMOUS
"GLEBE"
PURE CANE SUGARS.
"GLEBE" SUCROSE should be used by all Chemists to whom a perfect Sugar is of importance.
"GLEBE" SPECIAL CRYSTALS for Aërated Water Manufacturers has no equal.
Guaranteed Pure Cane and free from Chemicals, Blue, or other Colouring Matter.

For Prices and Samples send a Post Card to
GLEBE SUGAR REFINING CO., GLASGOW.

We have just received a fresh Consignment of New Season's Norwegian COD-LIVER OIL, and shall be pleased to send samples and quote in Barrels or Win. Qts.

HORA & CO.,
AGENTS,
47 MINORIES, LONDON.

BRITISH PHARMACOPŒIA
1898.
ALL THE NEW AND ALTERED
Galenicals.

THE GALEN MANUFACTURING CO., LTD.
Wilson Street, LONDON, S.E.

CONDY'S FLUID.
ELEVEN INJUNCTIONS
With damages and costs, have been obtained against Chemists selling a liquid not manufactured by Condy and Mitchell, Ltd., in execution of orders for "CONDY'S FLUID."

COCA TONIC CHAMPAGNE
Prepared and Bottled by the Growers at Bouzy-Reims, from the finest Natural Champagne, and the leaves of the Erythroxylon Coca, and *not* from Cocaine.
We supply "Coca-Tonic" Champagne with Chemists' own name on the Labels.
For prices and particulars, apply to the Sole Proprietors—
HERTZ & COLLINGWOOD, 38 Leadenhall Street, LONDON, E.C.

MELLIN'S FOOD
For INFANTS and INVALIDS.

The principle of
Fletchers' Concentrated Liquors
is now recognised in the
BRITISH PHARMACOPŒIA, 1898.

Editorial Comments

THE BRITISH PHARMACOPŒIA, 1898.

We deal so fully in preceding pages with the new edition of the British Pharmacopœia, to be issued in a few weeks that little in the way of comment needs to be added place. Criticisms and explanations of the changes formulæ and descriptions in the new Pharmacopœia will abundant enough as the year goes on, and, as will be seen, these have begun already. Our own preliminary article aims to give pharmacists such particulars of the new preparations, and of alterations in old ones, that they may be ready to meet the requirements and inquiries of up-to-date physicians promptly. It may be useful to repeat here what we have previously stated—that a reasonable interval will be allowed between the publication of the new Pharmacopœia and its authorisation as the legal standard for medicines named in it. This will be announced when the publication and its price are gazetted. Meanwhile, however, the new preparations are already being manufactured by London and provincial wholesale druggists, and at least one price-list of them has been issued.

It is right that some explanation should be given to Chemist and Druggist subscribers of the absence of any notice of the new Pharmacopœia in our last week's publication. The simple fact is that, as usual at Easter-time, we went to press on Wednesday night (instead of Thursday, as is the case generally), and our review copy of the Pharmacopœia was delivered to us between 11 and 12 on the next day, Thursday, April 7. We should have no reason to complain if it were not for the undoubted fact that special favour in this respect has been shown by some of the officials of the General Medical Council towards particular journals. The *British Medical Journal*, for example, states that "a copy of the British Pharmacopœia, 1898, was made accessible to us on Wednesday, April 6." The *Lancet*, we understand, was treated in a similar manner to ourselves. We have also other evidence of partiality, which, however, it is unnecessary now to adduce.

Another matter to which we can hardly avoid some reference is the publication of our anticipatory review of the new Pharmacopœia last January. It is not our intention, either now or at any future time, to explain how the facts which we then revealed came into our possession. All we need say is that, so far as we know, no one betrayed any trust, either for love or for money. We have heard that one set of proofs which was missing about that time was a set which had been in the possession of the President of the Pharmaceutical Society. Where that set is we have no idea: it never came our way. Some silly comments were made at the time on our conduct in publishing information which was intended to be secret; our critics would be puzzled to point out any moral distinction between our action and that of the *Times*, for example, in obtaining early and special information of what has been occurring in Peking. But there remains this to be said: We discontinued the publication of our articles because we were positively assured that they were erroneous in so many respects as to be positively ludicrous—that our statements were, in fact, more often wrong than right. The published articles and what we indicated as suppressed are in evidence, and anyone who is curious on the subject can compare them with the now authorised version. Every candid critic will admit that we scored at least 80 marks out of a possible 100 for absolute accuracy, and that we were very much up-to-date indeed at the moment.

The first thing that strikes one on opening the new Pharmacopœia and getting beyond the redness of the covers is how like the book is to its predecessor, the 1885 B.P. The type is the same, and, with the exception of a more liberal use of capital letters and italics, the one might easily be taken for the other. The double-column quantities in the formulæ—the first marked "Imperial" and the second "Metric"—constitute the most striking difference between the 1885 and the 1898 pages. The manner in which the two systems have been reconciled is excellent. The omission of lists of preparations into which articles enter looks like a loss at first sight, but we think that will not be a permanent feeling. No other Pharmacopœia has such lists, and they are almost useless. The new B.P. is distinguished from its predecessors most by the absence of detailed directions as to the preparation of chemical medicines and the greater pains which have been taken to make the "characters and tests" reflect the quality of what is commercially obtainable. In galenical pharmacy there are no striking innovations except the recognition of an officially new class of preparations—viz., "concentrated liquors" for the preparation of decoctions, infusions, and tinctures—in the last case "liquid extracts" is what the concentrations are called. There appears to have been no attempt to meet the demand of the past few years to make the Pharmacopœia up to date in the matter of new medications. Syrup of This and compound syrup of That are not in it. There is no formula for gelatine-capsule mass or for building drugs into tablets by compression. It is, in brief, the old B.P. altered greatly. The uniformly unsuccessful attempts to provide official imitations of proprietary medicines have not been extended, and in view of the alarming effort to improve the chlorodyne substitute we may be thankful for this reticence. Every paragraph appears to have been considered; too obviously many of them show signs of compromise.

Some respect for the now generally accepted legal authority of the Pharmacopœia as a standard under the Sale of Food and Drugs Act has been shown. Soda-water, vinegar and dietetic preparations generally are left alone; there is no attempt to force the hand of the Inland Revenue by authorising a coca-wine as a medicinal preparation; saffron is no longer an ingredient in tincture of rhubarb, tr. opii ammoniata, or pulvis cretæ aromaticus. On the other hand, the long-standing dispute between the milk of sulphurites and the precipitated sulphurites, and that between the contestants for the old sweet spirit of nitre as distinct from the spirit of nitrous ether, are settled by the final expulsion of both of the old preparations, for both of which, we believe, in old times the Editor of the Pharmacopœia has argued. Seidlitz-powders remain as a foot-note synonym for pulv. sodæ tart. effervescens, and there seems nothing new to note in regard to trade-marked titles.

These are some of the salient features of the Pharmacopœia which our examination suggests as of importance, and which, with many others, are dealt with in detail in our review. Criticism has already begun, and will no doubt flow in an abundant stream before long; but we think the general verdict of pharmacists will be that on the whole the work has been well and wisely performed, and that the British Pharmacopœia is not second to that of any country where one is published.

BAD EXPORT BUSINESS.

The Board of Trade returns for the month of March show the substantial increase of 2,757,715*l.* in the imports as compared with the corresponding period of 1897, the total being: 1898, 43,412,829*l.*; 1897, 40,655,114*l.* The two principal additions are those of 2,347,485*l.* and 253,954*l.* on respective totals of 14,894,777*l.* and 3,635,334*l.*, under the headings of articles of food and drink, duty-free, and of the raw materials for sundry purposes. Chemicals, however, show a falling-off to the extent of 260,653*l.* For the three months ending March 31 the imports amounted to the total value of 119,099,209*l.*, as against 117,633,863*l.* last year—an increase of 1,465,346*l.* The only imports which for this period show decreases are those under the headings of chemicals and raw materials for textile manufacturers, the former showing a decrease of 445,117*l.* on a total return of 1,813,741*l.* The imports of pepper increased by 598,523 lbs.

(24,008*l.*), but all other spices decreased — cinnamon, 18,650 lbs. (1,383*l.*); ginger, 618 cwt. (2,053*l.*); unenumerated spices, 792,398 lbs. (4,184*l.*). Quicksilver increased by 773,850 lbs. (70,984*l*). Under chemicals, dyestuffs, and tanning-substances we note increased imports in cochineal, 1,319 cwt.; aniline and other coal-tar dyes, 6,552*l.*; valonia, 7,532*l.*; other articles, 12,193*l.* On the other hand, there is a pronounced falling-off in indigo, 242,926*l.*, or 12,644 cwt.; cutch and gambier, 25,645*l.*; saltpetre, 17,452*l.*; chemical manufactures and products unenumerated, 2,519*l.*; alizarine, 2,072*l.*; brimstone, 1,830 cwt.; and alkali, 6,191 cwt. (262*l.*). The imports of fixed oils show a large increase all round, but especially in petroleum and cocoanut oil, the figures showing respectively an increase of 7,731,521 gals. (74,826*l.*) and 35,985 cwt. (40,307*l*); turpentine, 12,217 cwt. (15,199*l.*); olive, 1,242 tuns (44,234*l.*); palm, 7,751 cwt. (10,971*l.*); all kinds of seed oil, 488 tons (5,114*l.*); train, blubber, and sperm, 10 974*l.* Rosin decreased by 58,336 cwt. (15,561*l.*); gum arabic, 3,949 cwt (6.214*l.*); lac (seed, shell, stick, and dye), 5,761 cwt. (47,707*l.*); and unenumerated drugs by 3,618*l.* The exports for the month show an unfavourable record, a net decrease of 813 404*l.* being registered on a declared value of 20,833,865*l.* For the first three months of the year the totals are 57,707,118*l.*, as compared with a total of 59,298,187*l.*, or a decrease of 1,591,069*l.* There has been a falling-off in the exports of alkali by 128,917 cwt. (26,300*l.*); copper sulphate, 128 tons (9,931*l.*); chemical manure, 4,880 tons (37,105*l.*); medicines, comprising drugs and medicinal preparations, 12,597*l.*; "other articles" classed under chemicals show an increase of 13,871*l.* Notwithstanding the greatly diminished exports of alkali to the United States, they still remain our largest customers, 89,149 cwt. having been exported there in March, against 253,040 cwt. and 269,535 cwt. in 1897 and 1896 respectively. The next best customer is Spain and the Canaries, 34,200 cwt. The exports of foreign and colonial merchandise for the month are given at 5,100,574*l.*, and show a decrease of 170,279*l.*; while those for the three months, returned at 15,110,772*l.*, show a net increase of 460,796*l.* Under this heading only 16 cwt. of borax was exported; chemical manufactures and products unenumerated decreased to 14,812*l.*, as compared with 17,711*l.* for March, 1897. Gums, fixed oils, quicksilver, saltpetre, and unenumerated spices all show a shrinkage, pepper alone presenting a decided increase.

FRENCH LAW ON TRADE-MARKED MEDICINES.

The brief reports of the two actions contested by M. Petit against the proprietors of chloralose and salol, which we published in February and March, did not quite clearly show the grounds of the judgment. We have since received copies of a French legal journal (*La Loi*, March 4 and 31), in which the judgments are given in full. These are of considerable interest to manufacturers of synthetic and other pharmaceutical products. In the first place it is generally known that medicines cannot be patented in France, but a monopoly to a great extent has been acquired in many substances by the fact that their titles can be registered as trade-marks. In the case of "Chloralose" the facts were that on January 9, 1893, the doctors Henriot and Richet communicated to the Academy of Sciences a note on the therapeutic properties of a compound of chloral and glucose which they had studied, to which they said they proposed to give the name of chloralose. It appeared, however, that Messrs. Baier & Fournier, chemists, who had assisted these doctors in their researches, had on December 27, 1892, registered that word as a trade-mark. M. Petit some time after, believing that this was an unfair attempt to secure a monopoly, made and sold the same substance, sometimes under the title chloralose, sometimes as "Glucochloral, synonym chloralose." An injunction against him was granted by the Civil Tribunal of the Seine, on March 15, 1895, but the Court of Appeal on February 8, 1898, reversed this judgment, and ruled that it could not be permitted to evade the distinct intention of the law refusing the protection of a patent to a medicinal substance by the adoption of a name which is not a purely fancy one. Such a name as chloralose was regarded as "a necessary designation, than which none could occur to the mind more simple or more natural." And it was held that such a name was not entitled to registration.

On March 10, 1898, M. Petit scored an equally complete victory in regard to the word "Salol" in the Court of Appeal. The history of this litigation is of special interest. It was on April 6, 1886, that Dr. Nencky made a communication to the Society of Medicine and Pharmacy of Berne, on a new product which he had discovered, the salicylate of phenol, a substance which in the course of his note he described as salol, from the first and last syllable of the full descriptive name. On April 23, 1886, Drs. Nencky and Von Heyden patented at Berlin a process for the manufacture of phenolic and naphtholic ethers called, they said, salol. On April 14, 1893, Messrs. Durand & Huguenin registered the word "Salol" as a trade-mark of their firm for pharmaceutical products. The Civil Tribunal of the Seine had also granted an injunction against M. Petit in respect of infringement of this trade-mark, but the Court of Appeal not only reversed this judgment but ordered Durand, Huguenin & Co. to pay all M. Petit's expenses, and 100 fr. in addition as damages.

THE BRITISH PHARMACOPŒIA, 1898.—IMPORTANT OFFERS TO SUBSCRIBERS.

It is expected that the British Pharmacopœia, 1898, will be published in two or three weeks. The Executive Committee of the General Medical Council have recommended the Treasury to fix the price at 10*s.* 6*d.*, and it is probable that that suggestion will be adopted. Assuming that 10*s.* 6*d.* will be the published price, we shall be prepared to supply the book to subscribers to The Chemist and Druggist at 8*s.* net, including packing, postage, and a reprint of our review of the work, with such additions as may seem useful, forming a concise and complete guide to the alterations effected, and a summary of the points important to be noticed by pharmacists.

Subscribers are invited to send their remittances promptly. Postcard acknowledgments will be sent, and the books will be forwarded as soon as possible. It must be understood that if the price is fixed at more or less than 10*s.* 6*d.* a proportionate difference will be charged or allowed.

We also offer to subscribers to The Chemist and Druggist reprints of our review of the new Pharmacopœia, to be neatly produced in pamphlet-form, at the rate of 2*s.* 6*d.* per dozen post-free. Any number (not necessarily dozens) will be supplied at this rate, and these reprints will be ready for despatch on Tuesday of next week. We recommend these pamphlets to chemists for distribution to medical men.

THE COUNCIL ELECTION.

We want a poem on the coming election. We have laureates to whom we can turn, and who would grind us out verses on this as on any other subject; but this time the poem must be a composite one. We want all the talent of the trade to be engaged on it.

There are sixteen candidates, and each must have a couplet to himself.

What we ask is that competitors shall send to us

BEFORE THE END OF APRIL

one or more couplets for or against certain candidates. The surname (at least) of such candidate must appear in one of the lines, and we shall prefer it if it finishes the line—that is, if it is the word for the rhyme; but we do not insist on this condition.

When we get all the postcards before us we shall select a couplet referring to each candidate, and shall publish the thirty-two lines as one poem. For the two best couplets we are willing to pay

TEN SHILLINGS EACH;

for the next two best we offer five shillings each; and for the twelve others which shall be selected 2*s*. 6*d* each. Our own poor judgment will have to be accepted as the final test, so perhaps the poorest rhymesters may stand a good chance. But it must be remembered that only one couplet for each candidate can be selected.

Competitors may send in as many couplets as they please, and we shall not restrict them as to metre. Anybody may compete—ladies, gentlemen, poets laureate, English, Irish, Scotch, Welsh, Frenchmen, Chinamen, subscribers, and non-subscribers.

The following are the candidates:—

Charles Bowen Allen
Samuel Ralph Atkins
Thomas Bateson
Algernon Sidney Campkin
Octavius Corder
William Gowen Cross
Walter Gibbons
Nicholas Male Grose
Walter Hills
John Johnston
William Martindale
George Thomas Wilkinson Newsholme
Arthur Ledsam Savory
David Storrar
Charles Symes
William Warren

Side Lines.

HINTS FROM EXPERIENCE.

III.—AGRICULTURAL SPECIALITIES.

FARMERS are often a difficult class to cultivate, on account of their conservatism, but once convince a yeoman that you understand his requirements and can cater for his needs, and you are sure of a customer with a liberal hand, and a man who will be a living advertisement for your business.

To commence such a "side line" it is advisable to first find suitable forms and then put up about half-a-dozen good saleable veterinary and agricultural specialities. The first to suggest itself is an

ALTERATIVE CONDITION-POWDER

for horses, a good form for which is:—

	Oz.
Linseed meal	10
Powdered ginger	10
Powdered fenugreek	30
Powdered aniseed	15
Powdered cumin	15
Powdered resin	16
Powdered saltpetre	16
Black antimony	16
Sublimed sulphur	32

in 1-lb. tins 1*s*. each, and the best way to introduce it is to send a sample, say 4 oz., to all the farmers in the district whose names are in the county directory, and to the tradesmen in the neighbourhood who keep horses, accompanied by a little printed circular (a cyclostyle comes in useful here) asking them to give it a trial.

Sheep-farmers will appreciate a good

FOOT-ROT PASTE,

and this form, which has never, by the writer, been known to fail, will be found as profitable as it is efficacious:—

Powdered blue-stone	8 oz.
Verdigris	2 dr.
Resin	8 oz.
Turpentine	4 dr.
Gunpowder	2 oz.
Palm oil	3 oz.
Olive oil	3 oz.

To be mixed in the order given.

Four ounces in gallipot for 1*s*.

An excellent

CLEANSING-DRENCH FOR COWS,

which sells for 9*d*. to 1*s*., is

	Oz.
Castile soap	1
Saltpetre	1
Ground caraway	1
Glauber or Epsom salts	6
Armenian bole to colour.	

In some districts there is a great demand for wheat-dressing, and whilst some farmers prefer to use the old-fashioned blue-stone, there are many, nevertheless, who will be ready customers for powdered blue-stone, coloured with Armenian bole, put up in pound-packets, labelled "Farmers' Friend," and sold for 6*d*. each packet.

A good pig-powder has a ready sale, whilst cough-balls, blisters, black oils, and cordial-drinks are constantly asked for by farmers and horsekeepers, useful forms for all of which will be found in "Veterinary Counter-practice."

The agricultural chemist will find profitable customers among the stablemen at local mews and the kennels of his district.

One way to advertise the agricultural portion of the business which has been found to be easy and efficacious is to let the errand-boy go the round on market-day of the posting-inns and place bills advertising the chemist's veterinary specialities in all the farmers' and carriers' carts. Perhaps an even better mode is to have painted on all the carts that come regularly into the town, where the chemist can come to terms, a suitable advertisement, which will be almost sure to pay for the outlay fifty or a hundred fold.

Lastly, it is advisable to mix such specialities in the basement or store-room, as care must be taken not to allow the dispensing-department of the business to suffer through a strong odour prevailing from the preparation of horse-powders or foot-rot paste, or from the mess and dust likely to be occasioned.

EXPORT-DUTY ON ARRACK.—One of the strongest liquids distilled in the East is arrack, which is made in Ceylon by fermentation of the milk of the cocoa-nut and subsequent distillation. There is a considerable export trade in this to India, and as the Ceylon Government want money just now they have imposed a duty of 1·25r. per gallon upon all that is exported, which is expected to yield a revenue of 150,000r.

APOTHECARIES IN THE U.S. NAVY.—For the information of patriotic young pharmacists who wish to serve their country afloat the *American Druggist* gives the following particulars as to the proper method of application for appointment and the character of the examination required:—A candidate must be between 21 and 28 years of age. Apothecaries for duty on cruising vessels are enlisted for three years; those for duty on receiving and stationary ships for one year; those for coast-survey vessels are enlisted for the cruise, which does not exceed five years. The pay is $60 per month. Applicants are examined by a board of three medical officers, who pass them in the usual physical examination. They must also present testimonials or certificates as to character, good habits and sobriety, and be required to pass a satisfactory examination in: (1) general and (2) professional education, the latter part including materia medica, pharmacy, chemistry and toxicology. A practical knowledge of bandaging, minor surgery, application of dry and wet cups is requisite.

The New Pharmacopœia.

By F. W. Fletcher, Ph.C., F.C.S.

I.

THE whirligig of time brings strange surprises. Ten years ago few events would have seemed more improbable than the official recognition of "concentrated liquors" in the British Pharmacopœia. And yet what seemed almost impossible a decade ago has become an accomplished fact in 1898.

At least one member of the pharmaceutical committee must have undergone grievous searchings of heart ere he could bring himself to swallow the obnoxious leek. But *sera nunquam ad bonos mores via.* And though the operation of deglutition must have been accompanied by many a wry face, it is enough to know that it has been accomplished.

In this country a Pharmacopœia is so manifestly a compromise between conflicting aims and interests that the once prevalent belief in its infallibility has now been relegated to the limbo of many other once cherished but now discarded creeds. It is doubtful, indeed, whether the legend "by authority" evokes much reverence either, on the one hand, from the *fin-de-siècle* prescriber, who has joined himself to the idols of German synthetic remedies, or, on the other, from the practical pharmacist, who, with his tongue in his cheek, has to assist in the "make-up" of the antiquated drugs and formulas which, in the picturesque phraseology of the *British Medical Journal*, "still lag superfluous upon the stage." Signs, however, are not wanting that the sacrilegious hand of the reformer is already extended towards the sacred ark of the General Medical Council itself.

Mr. Victor Horsley has disturbed the valley of dry bones to such an uncomfortable extent that, in the resurrection which may be expected to follow, there ought to arise a living, breathing, up-to-date organism. Is it too much to hope that when the awakening takes place the British Pharmacopœia of 1898 will be "hatched over again, and hatched different"?

In the meantime we have to deal with "a thing of shreds and patches"—a compilation which, at the best, represents a *modus vivendi* between the opposing forces of stupidity and common-sense, ignorant prejudice and scientific progress, fossilised custom and radical reform.

It was recently stated that the late Sir Richard Quain had the strongest objection to prescribing any medicine not sanctified by the title B.P. Such being the attitude of the President of the General Medical Council towards modern pharmacology it is scarcely surprising that Pharmacopœia reform should travel, as Lord Salisbury said of the European Concert, with the velocity of a steam-roller.

The most conservative of mankind, as political history bears witness, when once fairly started on the warpath of reform, are apt to astonish the world by the daring of their performances. To use an inelegant but expressive phrase, they "go the whole hog" with a cheerful alacrity which completely takes away the breath of the wondering spectator.

The reforms, bordering on revolution, which will distinguish the Pharmacopœia of 1898 from any of its predecessors are (1) the introduction of concentrated liquors and (2) the abolition of proof spirit.

As regards the first of these innovations, the principle having been conceded, it would be ungenerous to criticise its application too severely. Although the latter has been carried out in a muddling, half-hearted fashion, the fact remains that two of the most important tinctures in the Pharmacopœia—viz., belladonna and nux vomica—are now prepared from standardised concentrated liquors. If the method be applicable to drugs of such potency as these, it may be hoped that less will be heard in future of its heinous character when applied to more innocent substances.

A paragraph in the preface draws a touching picture of how the compilers sought to woo from the twenty-two infusions and the three decoctions the secret of their preparation in a "highly concentrated state." But the "twenty-two and three" were either too coy or too loyal to betray themselves, and only ten more or less successful guesses are offered as "concentrated solutions."

The *Liquores Concentrati* will not figure amongst the best achievements of the revisers. In a somewhat oracular sentence it is stated that the "products of their dilution with water may be prescribed by practitioners in place of the corresponding official infusions." The preparations being included in the text, it might have been supposed that the practitioner would have been at liberty to prescribe them without this special indulgence. It would certainly not have been superfluous to add some intimation of the manner in which "the products of their dilution with water" could be indicated in the prescription. And perhaps it would have been still more to the point, as constituting the chief *raison d'être* of the liquors, had the sentence read "the products of their dilution with water may be *dispensed* in place of the corresponding official infusion."

Leaving for the present the *Liquores Concentrati*, and turning to the *Tincturæ*, the puzzled pharmacist may be excused if he unconsciously formulates the inquiry of Truthful James:—

> Do I sleep, do I dream, do I wonder and doubt
> Are things what they seem, or is visions about,

No more proof spirit! That is the hard fact which stares him in the face. A designation which had come to be part and parcel of his daily life—a common ground upon which he and the Sykes-ridden Inland Revenue officer might meet and understand each other, gone, wiped out of pharmacopœial existence—and for what? For an altogether new scale of alcoholic percentages as complicated and cumbersome as it is inconvenient and unnecessary.

"Proof" spirit has had a definite signification since the Act of 1801, and, needless to say, is the unit in terms of which alcoholic strengths are expressed not only by our own Revenue authorities, but in other parts of the world. Calculations for drawback on medicinal tinctures and spirits must always be made on this basis, and the content of every bottle declared in gallons or fractions of a gallon of "proof spirit." To substitute for this well-established and universally understood factor a series of strengths bearing no definite relation to "proof" is a proceeding which could only be justified on very strong grounds. Has sufficient cause been shown for the sweeping change? It seems impossible to discover even one substantial reason. Spirit of no fewer than six different initial strengths is now employed in the preparation of tinctures. Ten of the latter are prepared with 45-per-cent. alcohol, twenty with 60-per-cent., fourteen with 70-per-cent., seventeen with 90-per-cent., whilst tr. opii and tr. pruni virg. have each a separate strength.

Will any sane person be found to maintain that the chemical, physical, or therapeutical effect of a tincture made with spirit of sp. gr. ·913 (which is the density of the new 60-per-cent.) would materially differ from that of a tincture made with spirit of sp. gr. ·920 (the density of the discarded "proof")? Again, the fourteen tinctures made from 70-per-cent. alcohol might just as well have been divided between 90-per-cent. and proof. As compared with the corresponding tinctures of the 1885 edition, forty-one tinctures have been increased in alcoholic strength, whilst only eighteen have been reduced. Amongst the latter are those of hyoscyamus and jaborandi. Now if any tincture required a menstruum of stronger rather than weaker alcoholic strength these were the two. Both are prepared from leaves, and leaves contain chlorophyll. Chlorophyll is permanently soluble in strong alcohol, whilst in weak spirit it is but sparingly soluble and soon becomes deposited as a sticky mass on the containing-vessel. Surely pharmacopœial perversity could not devise a more unfortunate innovation than this.

Is B.P. "Chlorodyne" a Blunder?

By Dr. J. C. McWalter, Dublin.

Some time since a man drank off a 6-dr. bottle of Browne's chlorodyne, and was brought to hospital, where he recovered. I happened to be speaking to the house surgeon about the case, and he argued that the man should not be charged with attempted suicide, for, according to the Pharmacopœia, chlorodyne contained only a grain of morphine to the ounce, and hence 6 dr. would not kill a man.

When the future house surgeon appeals to the B.P. for information as to the strength of chlorodyne, he will learn that it is four times the strength, as regards morphia, of the preparation of 1885. This appears to me to be the most important—I would almost say the most fatal—change in the new B.P. I happened to draw the attention of a practitioner who frequently orders tr. chlorof. et morphinæ to the alteration in the formula, and he was simply aghast, as he could never be sure in future what might be dispensed when he prescribed it—whether the preparation of 1885, which he was accustomed to and satisfied with, or the newer preparation of quadruple the strength of morphia.

The toxic effects of tr. chlorof. et morphinæ cannot be estimated by a calculation of the amount of morphia present, as the action is greatly intensified by the combination. In view, then, of the fact that it will probably be a very considerable time before practitioners become familiarised with the new preparation and its results, I submit that the only safe plan for pharmacists is to dispense the older preparation for some years unless the newer be specifically designated as tr. chlorof. et morphin. co. '98. If the compilers had been satisfied to modify the name as well as the formula of the preparation, the dangers of fatal error might have been avoided, and such a title as tr. chloroformi anodyna would be distinctive and convenient.

A change which I apprehend will give very considerable trouble to chemists is that of the strength of chloroform-water. The public, as is well known, judge of the quality of a medicine by the fulness of the aromatic flavour of the article or by the depth of its colour. Then, if one chemist dispenses a bottle with aqua chloroformi, present formula, and another rigidly follows the new Pharmacopœia, the former will be held to have supplied the better physic, and the latter a diluted substitute. By what obscure cerebral process the compilers came to the conclusion that this dilution was an improvement must be hidden from ordinary mortals, who had hitherto been free to order the dilution if they wished.

In spite of the time and money spent on aconite by research laboratories and others seeking for hypothetical active principles, there are few poisons whose toxic potency we are less acquainted with. But, although the dose of the tincture in the last Pharmacopœia was too large, it would, I submit, have been wiser to reduce the stated dose than to lessen the strength, because this preparation is one likely to be in stock for years to come in many pharmacies, and if the physician prescribes the new, and the pharmacist happens to dispense the older and stronger preparation, unpleasant results may follow.

A Guide to the New B.P.

Messrs. Wright, Layman & Umney, Southwark, S.E., have not let the Pharmacopœia grass grow long in their path. Last Saturday they issued a price-list of the new and altered preparations, and on Tuesday afternoon we received an advanced copy of "A Short Guide to the New British Pharmacopœia" written for them by Mr. John C. Umney, F.C.S., pharmaceutical chemist, one of the partners of the firm. The "Guide," with which we are chiefly concerned now, comprises fifty closely-printed octavo pages of comments on the new work, and is instructive from beginning to end. It is priced at one shilling. The "Guide" (which does not profess to be critical) begins with references to general principles, additions, omissions, principal alterations, standardisation, and the like; but what is most striking about the "Guide" is the series of tables which Mr. John C. Umney has compiled. The first one is on solubilities, which the British Pharmacopœia now makes a feature of, and Mr. Umney has collated these in a table occupying four pages, and given the particulars in respect to six solvents—viz., cold water, boiling water, 90-per-cent. alcohol, ether, chloroform, and glycerin. This will be useful for reference.

In writing about drugs the author has picked out a number of "side lines" which show that he has been "in the know." For example, there is the following statement regarding

Minimum Extractive Requirements of Drugs.

Aloes, Barb. ...	70 per cent. cold water
Aloes, Socot ...	50 per cent. cold water
Araroba	50 per cent. hot chloroform
Asafetida	65 per cent. alcohol (90-per-cent.)
Catechu	70 per cent. alcohol (90-per-cent.)
Elaterium ...	20 per cent. chloroform, &c. (Elaterin)
Eucalypti gummi	80 per cent. cold water
Jalap	9 per cent. alcohol (90-per-cent.)
Kino	80 per cent. boiling water
Lupulin	60 per cent. ether
Scammonium ...	70 per cent. ether

"The limits of ash from drugs" are also placed together thus:—

	Per cent.		Per cent.
Acaciæ gummi	4	Colocynthidis pulpa ...	9
Asafetida	10	Crocus	7
Cambogia	3	Gossypium	1
Capsici fructus	6	Linum contusum ...	5
Carbo ligni	7½	Lupulinum	12
Cardamomi semina ...	4	Mel depuratum	0·2
Carui fructus	8	Moschus	8
Caryophyllum	7	Podophylli resina ...	1
Catechu	5	Saccharum lactis ...	0·25
Chrysarobinum	1	Scammonium	3
Coccus	6	Succus limonis	3

Then follows a table showing the alterations in the botanical sources of drugs. All the changes except four are in name only. The first of the four exceptions is aconite-root, which much must be grown in Britain *only*; the second is buchu, of which henceforth only the "round leaf," *Barosma Betulina*, is to be used (there is scarcely anything else to use); the third change is the substitution of Para rhatany (*Krameria argentea*) for Savanilla rhatany (*K. Ixina*)—an inexplicable change, as Peruvian rhatany is now practically the only kind that comes into the London market. Para and Savanilla rhatanies are chiefly of museum interest. By the way, the English for the drug is now to be krameria.

From this point the "Guide" proceeds to deal with the pharmacopœial articles alphabetically. It is pointed out, regarding the new alcohols, that they are in accordance with the methods of the French Codex. The following table gives the descriptions of the alcohol, approximate percentages by weight and volume, with sp. gr. and strength in degrees proof:—

Description of Alcohol —viz., Percentage by Volume	Percentage by Weight	Sp. Gr.	Degrees Proof
Alcohol (new spiritus rectificatus), 90 % ...	85·6	·834	58·2 over
Ditto, 70 %	62·5	·890	22·7 over
Ditto, 60 %	52·2	·913	5·2 over
Ditto, 45 %	38	·943	21 under
Ditto, 20 %	16·4	·976	65· unde
Old rectified spirit, 88·7 per cent. ...	84·0	·838	56 over
Proof spirit, 57·0 % ...	49·2	·920	Proof

The following table shows the approximate quantity of water required to reduce a definite volume of a stronger spirit to a spirit of lower strength. The original percentages by volume of alcohol are placed at the heads of the columns, and percentages to which they are required to be reduced in the first column of the table. The quantity of water to be added to 1 litre is first shown, and then the quantity to 1 gallon :—

—	90 %	70 %	60 %	45 %
70 %	310 c.c. 49½ oz.			
60 %	536 c.c. 86 oz.	175 c.c. 28 oz.		
45 %	1,053 c.c. 168 oz.	577 c.c. 92 oz.	344 c.c. 54 oz.	
20 %	3,558 c.c. 568 oz.	2,525 c.c. 404 oz.	2,014 c.c. 322 oz.	1,250 c.c. 200 oz.

There must be a limit to quotation from such a monograph as this, especially as it is entered at Stationers' Hall, so we content ourselves with a few of the more striking paragraphs :—

In the descriptions of essential oils the restrictions that the oil shall be distilled in Britain, or in certain instances from plants grown in Britain, have been removed. This is in accordance with the free-trade notions of the British people as regards those oils which can be distilled equally well anywhere from dried material: but opinions will probably differ as to the good policy of making no requirement that the oils of peppermint and lavender shall be obtained from plants grown in Great Britain. With reference to the former the necessity is perhaps not so great. The demand for the highest class of American peppermint oil has led to very great improvement in its characters, . . . but with lavender oil the position is not nearly so clear. The differences between English and foreign oils of lavender are almost as marked as between different species; it makes, however, but little difference where the oil is only used for a flavouring-agent, as in the compound tincture of lavender.

Eucalyptus Oil.—It would doubtless have been better to have introduced pure eucalyptol into the British Pharmacopœia, but as the committee has decided otherwise, the characters and tests seem to be satisfactory for obtaining a fair constancy in the character of eucalyptus oil supplied in medicine, so far, at any rate, as the eucalyptol and probable medicinal value goes. The inclusion, however, of "other species" will not do away with the difficulty of the difference of odour of such species as cneorifolia.

Rose Oil.—The characters and tests appear to be sufficiently wide to include all the finest ottos met with in trade. In an oil like this, where climate and soil make so great a difference in the relative proportions of its two important constituents, it is impossible to frame narrow limits for either specific gravity or congealing points.

Sandalwood Oil.—Objection may possibly be taken to the range of specific gravity, and recent publications have tended to show that the specific gravity may fall below ·975. In my experience, however, based upon an examination of a very great many samples of santal oil distilled by the principal distillers throughout Great Britain, France, Germany, this is approximately the range into which these oils fall, which have an alcohol (santalol) percentage of more than 90.

Ol. Morrhuæ.—The description of the oil now includes the removal of the stearine by filtration at a temperature of about 23° F. (−5° C.). The characters include the specific gravity and solubility tests in various bodies. The nitric-acid test is an exceedingly good one, and may be taken to form a very accurate criterion of the value of cod-liver oils.

Honey.—The monograph is omitted, following the rule for the omission of dietetic articles.

Liquor Caoutchouc.—The preparation is similar to that included in the U.S.P. The solution is not meant in any way to represent the liquor guttapercha of the 1885 Pharmacopœia prepared with chloroform.

The remarks on galenical preparations are pertinent, and the tables which accompany the notes, such as those on oils, ointments, and tinctures, show at a glance how matters now stand.

New B.P. Preparations.

THE following firms inform us that they will supply the new and altered galenical preparations of the British Pharmacopœia, 1898, in most cases as soon as the book is published :—

Messrs. Allen & Hanburys (Limited), Bethnal Green, E.
Messrs. Barron, Harveys & Co., Giltspur Street, E.C.
Messrs. Evans, Lescher & Webb, Bartholomew Close, E.C.
Messrs. Evans, Sons & Co., Liverpool.
Messrs. Fletcher, Fletcher & Co., Holloway, N. (Conc. Liquors).
The Galen Manufacturing Company (Limited), New Cross.
Messrs. Hearon, Squire & Francis, 38 Southwark Street, S.E.
Messrs. Wright, Layman & Umney, 50 Southwark Street, S.E.

Announcements by these firms will be found in our advertisement section, where also will be observed an announcement to the effect that a new edition of Squire's "Companion to the B.P." is in preparation.

Mr. H. Wippell Gadd, A.P.S., of the firm of Evans, Gadd & Co., of Bristol and Exeter, is preparing "A Pocket Synopsis of the British Pharmacopœia, 1898," to be sold at 6*d*.

Medical Gleanings.

FREQUENT MICTURITION.

FOR a young patient much troubled in this way, Dr. Percy Newell (Crowborough) recommends the following in the *B.M.J.* :—

Tr. lycopodii clar.	ʒiiss.
Tr. cardam. co.	ʒiiss.
Syrup. simp.	℥ss.
Aq. ad...	℥vj.

Ft. mist.

Sig.: ℥ss. 4tis horis sum.

ERYTHROL TETRANITRATE.

MR. C. R. MARSHALL, Cambridge, protests in the *British Medical Journal* against the tendency to lapse into the simple name erythrol instead of the more unwieldy name of erythrol tetranitrate. Physiologically there is nothing in common between the two chemicals. If a shorter name is required he suggests that it be called simply erythrol nitrate, no other nitrate besides the tetranitrate being at present known. Dr. Tunnicliffe suggests simply tetranitrine, which is good when its resemblance to trinitrine is borne in mind. Dr. Lauder Brunton at the International Congress revived the old name nitro-erythrol, which is not to be recommended, as the substance has not a nitro body. The expensiveness of erythrol tetranitrate has been objected to. Mr. Marshall thinks that mannitol (hexa) nitrate, possessing as it does the same action, although not so powerful, might be found therapeutically as good. It is readily prepared, and would be much cheaper, especially if not crystallised.

PROTARGOL IN GONORRHŒAL OPHTHALMIA.

DR. L. FÜRST, of Berlin, reports in the *Forsch. d. Medicin* that he has had excellent results in the treatment of gonorrhœal ophthalmia with protargol, the new silver compound which has recently been introduced (*C. & D.*, January 15, page 99). He uses it both as a prophylactic and curative in 10-per-cent. solution, made by rubbing 10 gr. of protargol with 8 minims of glycerine and adding 1½ dr. of distilled water.

TRIONAL FOR THE INSANE.

From a paper by Dr. S. Koonfeld in the *Wien. Mediz. Blat.* we learn that trional has a wonderful influence in calming the excitement of the maniacal, which prevents sleep, because a few minutes after 15 to 30 gr. doses the pulse becomes sensibly steadier. Thus by the time that sleep supervenes, say thirty minutes at the outside, the rate of beat has fallen from 160 to 105, 160 to 116, 180 to 140, and 140 to 93 in different individuals.

Marriages.

Keith—Winship.—At the Catholic Apostolic Church, Gloucester Street, Newcastle, on April 12, John Keith, chemist and druggist, Blyth and Dumfries, to Isa W. Winship, eldest daughter of the late Wm. Winship, Waterloo Villas, Blyth.

Lander—Smith.—At St. Thomas' Church, Eighton Banks, co. Durham, on April 11, by the Rev. S. Atkinson, assisted by the Rev. J. G. Disney, Arthur Lander, pharmaceutical chemist, Canterbury, to Hannah, eldest daughter of Councillor J. Smith, of Wrekenton.

Deaths.

Barlow.—At Linden Cottage, Eastbourne, Darlington, on April 5, Mr. Samuel Barlow, chemist and druggist. Aged 79. Mr. Barlow died suddenly whilst engaged gardening, but had suffered from paralysis for a long time. He was in business in Bondgate for many years.

Bramwell.—On March 27, Mr. Jas. Bramwell, chemist and druggist, Nelson Street, Liverpool. Aged 62.

Brookes—On March 7, Mr. A. F. Brookes, chemist and druggist, Grange Road, Charing Cross, Birkenhead. Aged 34.

Cuthbert.—On April 1, at High Street, Bedford, Mr. John Mason Cuthbert, chemist and druggist. Aged 75. Mr. Cuthbert died suddenly, after an illness lasting only a few hours. He had been in weak health for some time. Mr. Cuthbert was born at Coningsby, where his father was a large farmer. He went to Bedford in 1854, and took over the business then carried on by Mr. Ward. About thirty years ago he became a partner in the chemists' business carried on in Bedford by Messrs. Stewardson & Taylor, and until quite recently the business was continued under the style of Taylor & Cuthbert. When Mr. John Usher Taylor died Mr. Cuthbert continued to carry on the business until his retirement in 1882, when he disposed of it to Mr. J. B. Taylor, who now carries it on in partnership with Mr. Brawn. Mr. Cuthbert was a member of the Town Council from 1883 until 1886. He was also a Governor of the Harpur Trust, a Justice of the Peace for the Borough, and for twenty-six years churchwarden at St. Paul's. He was a staunch Liberal and one of the pioneers of the Volunteer movement in the town. He leaves a widow and one son.

Davies.—At Roe, Gan, St. Asaph, on April 6, Mrs. Davies, widow of Mr. Davies, of the firm of Messrs. Davies & Roberts, chemists and druggists, St. Asaph. Aged 98.

Duffton.—On April 6, at Cosmos Lea, Gladstone Road, Huntly, Jeannie Strachan, beloved wife of Robert Duffton, chemist. Aged 26 years.

Gorrie. — Mr. Daniel Gorrie, pharmaceutical chemist, Edinburgh, died very suddenly at his residence, 2 Cameron Terrace, on Saturday morning last, April 9. He complained of slight indisposition on Friday night on returning home from business, and went to bed. On Saturday morning, as he did not get up at the usual time, his little girl went to call him and found him dead. Medical assistance was obtained, but the doctor said he had been dead for four hours, probably from syncope. Mr. Gorrie was a native of Perth, and served his apprenticeship with Mr. Glass there. He entered the employment of Messrs. T. & H. Smith, Edinburgh, about 1876, and on passing the Major examination he acquired the business, in 1878, at 31 Minto Street, Edinburgh, which he has carried on since. He was a thoroughly practical pharmacist, and occasionally read papers at the evening meetings of the North British branch of the Pharmaceutical Society. Mr. Gorrie was only 42 years of age, and leaves a widow and five young children.

Lea.—On March 26, Carolina Sophia, wife of Mr. John Lea, chemist and druggist, Harbour Street, Folkestone. Aged 75.

Leal.—Mr. Alexander Leal, chemist, died in the Royal Infirmary, Edinburgh, on Sunday last. Mr. Leal was in business as a chemist and druggist in Lauder in 1868, and as such was registered at that time. At a later period he made his way to Edinburgh, where he obtained employment first with Messrs. James Robertson & Son, George Street, and latterly with Messrs. J. F. Macfarlan & Co., North Bridge. About two or three years ago he acquired a small chemist's business in High Street, but being in delicate health he was compelled to relinquish it. He was over 50 years of age.

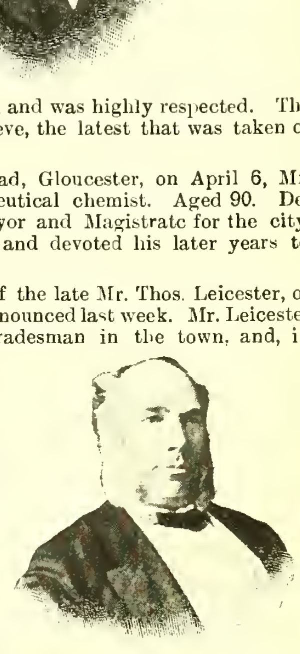
Macduff.—On April 1, Mr. Jas. Macduff, chemist and druggist, High Street, Paisley. Aged 61.

Mackey.—At 26 Sussex Gardens, W., on March 26, Mr. John Brunt Mackey, pharmaceutical chemist. Aged 84. Mr. Mackey was a native of Plymouth, where he was apprenticed to a retail chemist, but immediately after finishing his apprenticeship he came to London and entered as a clerk at 60*l.* a year into the establishment of Messrs. Gale, Baker, Ward & Oldfield, wholesale druggists. He ultimately became a partner in this firm, and after the death of the other partners he as senior carried on the business in Bouverie Street until about 1870. He then seceded and founded the present firm of Mackey, Mackey & Co., which was at first carried on in Bouverie Street and for the last four or five years at 175A Grange Road, Bermondsey, S.E. Mr. Mackey was an ardent Freemason and was treasurer of the Galen Lodge from the time of its foundation until his death. He had been connected with the Pharmaceutical Society since 1842, and served as an auditor in 1867.

Marson.—We gave last week a brief account of the late Mr. James Marson, chemist and druggist, of Stafford, who died on March 30, at the age of 88. Mr. Marson was very well known in Staffordshire, and was highly respected. The portrait annexed is, we believe, the latest that was taken of him.

Stafford—At Park Road, Gloucester, on April 6, Mr. William Stafford, pharmaceutical chemist. Aged 90. Deceased, who was an ex-Mayor and Magistrate for the city, had retired from business, and devoted his later years to public affairs.

We give here a portrait of the late Mr. Thos. Leicester, of Burslem, whose death we announced last week. Mr. Leicester was probably the oldest tradesman in the town, and, in spite of his advanced age, took a keen interest in business-affairs till his death. He practically retired from active participation in the affairs of his business in Market Place about ten years ago, but went there every morning as usual. On the day of his death he retired to the sitting-room adjoining the shop to rest, and was found dead a short time afterwards by the head porter, John Martin, who has been in the employ of the firm for over thirty years. Dr. King Alcock was called in, but could only pronounce life extinct. The business at Market Place will be carried on as usual by the surviving partners, Messrs. Thos. Leicester and Benjamin Parker.



The Winter Session.

GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

THE closing meeting of the session of this Association was held on April 5, Mr. W. L. Currie (President) in the chair.

The first business was the consideration of the President's suggestion that in future the Association meet once a month upon Thursday evening, instead of once a fortnight and upon Tuesday evening. It had been a matter of some concern to him, he said, that during the past session the fortnightly meeting had proved too big a drain and strain upon the members of the Association. He had consulted several members on the matter, and it was their opinion that if they only met once a month and had only six instead of twelve meetings during the session they would get larger attendances and a better series of papers. The motion was unanimously agreed to.

PHARMACY BILL.—IS GLASGOW APATHETIC?

The PRESIDENT said there seemed to be a feeling that the Association was not enthusiastic or unanimous in favour of the Pharmacy Bill. He differed from that opinion, and suggested that he should be asked to draw up a circular letter and obtain the signatures not only of the members of the Association, but of every registered chemist and druggist in business in Glasgow and the West of Scotland. Negotiations were proceeding in connection with Mr. Cross's opposition, and while it might not convince that gentleman, he was of opinion that if he could show that it was the unanimous desire of the chemists of Glasgow and the surrounding districts that the Bill should pass it would tend to lessen the power of his opposition.

Mr. WALKER asked if Mr. Cross was really of opinion that the Bill was not supported by the majority.

Mr. CURRIE replied that Mr. Cross had expressed that opinion.

Mr. SUTHERLAND, referring to the statement made by Mr. McKellar in THE CHEMIST AND DRUGGIST about the apathy of the trade, said a statement remained a statement until it was confuted. For that reason he supported Mr. Currie's proposal.

Mr. CURRIE asked Mr. McKellar if he was right in stating that he had withdrawn his opposition.

Mr. MCKELLAR replied in the affirmative, and explained that he withdrew because of representations made by gentlemen in the Society, who pointed out to him that it was absolutely essential for the Society's benefit that the members should be unanimous. Whatever his personal convictions might be, he saw the reasonableness of their representations, and there and then frankly withdrew. He had written to THE CHEMIST AND DRUGGIST withdrawing, and stating that he was doing his best to forward the interests of the Bill. He trusted they would be satisfied with his statement.

Mr. RUSSELL said it was desirable to do away with the belief entertained by Mr. Cross that there are numbers of chemists in Glasgow and the West of Scotland who are not desirous that the Bill should become law.

Mr. WALKER said he came in contact with as many outside chemists as anybody, and he had not met one who was opposed to the Bill, but there was a good deal of apathy all the same. Were the state of matters properly explained, he believed those who had hitherto been apathetic would decide in favour of the measure.

Mr. LAING said many druggists were apathetic to all interests but their own immediate business. They did not expect those people to be enthusiastic on the Bill. But they should spare no effort to show that the great bulk of the trade in Glasgow and the West of Scotland was in favour of it.

Mr. MCKELLAR explained that when he used the word "apathy" his idea was simply to show that of active interest there was little or none.

Mr. MOIR said the true explanation of the apathy was that it was thought it would be a non-contentious measure, and would pass without any opposition. The tone of the letter complained of was all the more regrettable because of the respect in which they held Mr. McKellar.

The proposal was agreed to.

THE MEMBERSHIP AND THE OFFICERS.

Mr. WATSON, in submitting the annual report, stated that the number of names on the roll at present was 197. The city masters numbered 75, and the assistants 60, making a total of 135, as against 126 last year. The country members numbered 62, as against 55 last year, bringing the total membership up to 197, an increase of 11 over last year.

Mr. SUTHERLAND said they had been endeavouring to induce Mr. Currie to retain the presidency, and they had some hope of succeeding. He therefore suggested that this matter should stand over.

Mr. CURRIE said he was deeply sensible of their kindness, but he required a little relaxation. Until they arranged for his successor, however, he was willing to fulfil the duties attaching to the chair.

The other officers were then elected as follows:—Hon. President, Mr. Daniel Fraser; Hon. Vice-Presidents, Mr. John McMillan, Mr. Alexander Kinninmont, and Mr. Alexander Laing; President, delayed; Vice-Presidents, Messrs. Foster, Robb, Russell, and McAdam; Secretary, Mr. David Watson; Treasurer, Mr. J. W. Sutherland. Committee: Messrs. Thomas Adam, Alexander Bord, J. H. Riddell, John Walker, James Moir, Robert Brodie, Alexander Bruce, Thomas Dunlop, Alexander Fraser, James Kerr, James McMurray, P. Mitchell, John Neil, D. S. Robertson, and Robert Tocher. Delegate to Federation meeting at Belfast, the Secretary.

DEWSBURY AND DISTRICT CHEMISTS' ASSOCIATION.

AT a meeting of this Association held on April 4 in the Town Hall, Dewsbury, Mr. A. Foster (President) in the chair, the rules of the Association were formulated, and Councillor S. Ward, Batley Carr, and Mr. R. Broadhead, Batley, were elected members of the Council. It was resolved to hold meetings on the first Monday in each month.

BRADFORD AND DISTRICT CHEMISTS' ASSOCIATION.

THIS Association met for its first annual dinner at the Great Northern Victoria Hotel on April 5. The attendance was rather disappointing, on account of an important Masonic meeting on the same evening. Mr. Waddington (Vice-President) occupied the chair. After dinner the following toasts were given:—"The Queen and Royal Family," CHAIRMAN. "The Pharmaceutical Society," Mr. J. A. MITCHELL; reply by Mr. F. A. WILCOCK. "Kindred Associations and Visitors," Mr. J. M. NEWBOULD; responded to by Messrs. WORFOLK (Ilkley) and ECKROYD (Keighley). "The Trade and City of Bradford," Mr. BRIGGS (Sowerby Bridge); replied to by Mr. R. W. SILSON. "The Bradford and District Chemists' Association," Mr. RUSSELL (Southport); replied to by Mr. S. M. PICKARD, Hon. Secretary. The healths of the Treasurer and of the Chairman were also drunk, and Messrs. Russell, Hanson, and Silson contributed songs.

MODESTY IN THE TRANSVAAL.—"Last Monday (February 28) forenoon, on entering Turner & Co.'s drug-store (Grand National Pharmacy), Pritchard Street (Johannesburg), to purchase some trifle, to my astonishment there stood a sergeant of the noble army of Zarps (S.A.R. policemen) remonstrating with the manager of the above-mentioned store about the exposure of a print in his window entitled 'A Visit to Esculapius,' a reprint of the famous picture by Sir E. J. Poynter, at present hanging in the Kensington Museum, London. This censor of public morals, doubtless a man of wide and varied experience in morals, had the temerity to approach a qualified gentleman and demand, on his own authority, the removal of such a print from that gentleman's window. The explanation the learned chemist tendered this noble Zarp seemed to satisfy him, for he immediately left, smiling serenely."—*Johannesburg Star.*

The January Minor.

A SUCCESSFUL candidate sends us the following details of his experience:—

PRACTICAL CHEMISTRY.

My paper was as follows:—

1. (*a*) Determine the sp. gr. of solution of sodium hydrate provided, and with the solution prepare 100 c.c. of normal solution of sodium hydrate. (*b*) With the solution prepared determine the percentage of oxalic acid in the powder (a mixture of oxalic acid and sodium chloride).
2. Examine the substance in the pill-box as directed (mixed with sodium phosphate).

Volumetric had to be done first. I took the precaution to get a dry specific-gravity bottle. It was well I did, as Professor McLeod shortly after came round and examined the bottles. Several candidates were "brought to book" on account of wet bottles. The Professor examined mine carefully, placed it back on the scale-pan, and smilingly told me it was "much better than he thought it was," which expression I thought rather curious. The sp. gr. having been found, I applied for tables, and the Professor took the pains to explain to me about the percentage meaning grammes in 100 grammes, and not in c.c. This, of course, necessitated the conversion of the number of grammes into c.c. required for the 100 c.c. of N solution. The acid was estimated in the usual way. I used phenolphthalein as indicator. It was just half-time, and I proceeded with my salt, which I found to be calcium carbonate, which, being mixed with the phosphate, required a little extra carefulness. Professor Kipping came round about 12 o'clock and examined the work done, which I thought was a new departure. At 2 o'clock I went to

DISPENSING.

Mr. Lucas examined. I had the following paper:—

Mist. ferri co.... ... ... ℥vj.
℥j. twice daily.

Ung. hyd. co., B.P., qty. in drachms
"The Ointment."

Creasoti ... ... ♏j.
Pulv. capsici ... ... gr. ss.
Ft. pil. Mitte xxiv. Varnish.
j. t.d.s.

Ext. opii ... ... gr. vj.
Ext. bellad. ... ... gr. ij.
Ol. theobrom. ... ... q.s.
Ft. suppos. vj.

Before commencing Mr. Lucas asked how much mixture I was going to make. I replied 6 oz., and pointed to the prescription. I was told I ought to make 10 oz., and throw 4 oz. away. Six ounces is a convenient quantity, and I know for a fact that in July a candidate had 6 oz. mist. ferri co. ordered, but made 10 oz., and the examiner told him he was wrong in doing so. I should hardly have thought that examiners would have differed on such a question. The pills I massed with soap and liquorice-powder.

A few days later I received a welcome intimation to present myself for the oral. My first turn, at 2.30 P.M., was in

PHARMACY.

Mr. Tanner opened the conversation by asking me to state the regulations referring to the sale of arsenic. After criticising my answers, he asked me about white precipitate and poisons in prescriptions. Next I had to write the ingredients for ext. coloc. co., and say how it was made; the difference between scammony and scammony resin. "How is the resin made? How is resin of podophyllum made? How to make extract. stramonii, ext. ergot liq.? What is the spirit for? Is it an aqueous or spirituous extract? How to make lin. pot. iodid. c. sapon.? Strength of iodide in it? Strength of hypodermic injection of morphia and hypodermic injection of apomorphine? Strengths of acid. HCl dil., HCN dil., HBr dil., vin. antim.?" There were one or two further questions.

PRESCRIPTIONS.

Mr. Phillips gave me about a dozen prescriptions to translate. After a few questions on Latin phrases, I was asked the doses of pulv. ipecac. co., pulv. opii co., ac. nit. dil., ac. hydroch. dil., ammon. carb., tr. nuc. vom., cocain. hydr., ext. cannab. ind., ext. ergot. liq., hyd. perchlor., hyd. iodid. rub., inf. digitalis, pulv. ipecac. as emetic and expectorant, liq. strychniæ, morph. hydrochlor., opii, ol. croton., tr. canth., with the strengths of several. Then I had to translate two prescriptions into full Latin.

MATERIA MEDICA.

Mr. Farr first asked me for my autograph; then he handed me bottles containing ol. santal. flav., creasote, pix liquida, ol. cajuputi and hordeum decort. I was next shown pulv. amyli, and asked, "What is starch? Where found? What is a carbohydrate? What is a hydrocarbon? Pick one out." I took hold of paraff. durus. "Yes; another?" I mentioned the pix liquida I had just before handled, but was told there was one nearer to me. I espied vaseline. "How is it made, and from what?" I was shown coca-leaves, and asked about the active principle and habitat. Then I had to identify hyoscyamus, digitalis, aconite, belladonna, stramonium and conium leaves, and conium-fruit (was this a good sample?). Senega-root—habitat, nat. ord., and preparations? I said tincture and infusion, and was asked if there was no decoction? "Hemidesmus-root—was it not, or would it not do for, sarsaparilla? Preparation? Scammony-root, and pomegranate-root bark" (the latter I did not recognise). Several samples of calumba-root were examined and questioned upon. Sassafras and Indian hemp—habitat? Difference between English and Indian grown, and if it was the same species, and what the active principles were?

CHEMISTRY.

Professor Kipping asked my number in practical work, and my book was fished out from twenty or thirty others. The Professor looked through it and said that, from my work, I evidently understood it all right. I was asked how to separate barium and strontium in analysis, and to detect arsenic and antimony in the presence of each other? Marsh's and Fleitmann's tests had to be explained, and special stress was laid upon the precautions to be taken before applying Marsh's. How to estimate hydrocyanic acid, with explanation of the formation of the double cyanide, with equations. "Why was the alkali added, and why kept in excess?" The distinguishing test for phosphates and arseniates; the estimation of phosphates; how to prove the presence of Cl in chloroform, and iodine in iodoform. I was told that students ought to use the microscope more in chemical analysis. Asked to name the chlorides of phosphorus, and to write equations showing the reactions of each with water, to explain the reaction between potassium chromate and hydrochloric acid, and how to make chromate from bichromate, with equations. "What is a metal? What are the differences between metals and non-metals?" with questions on the oxides of both. "What is a base, a salt, an acid, valency?" Being told not to give a "definition," I said "value," and gave examples of monads, diads, and triads. "Write the equation showing the combustion of alcohol in air." The calculation of one or two volumes, the boiling-point of chloroform, and a word or two about the method for proving the composition of water by weight concluded the subject.

BOTANY.

Mr. Seward had a pile of specimens on his table. A large piece of wood was placed in front of me, with the question, "What is that?" A piece of a stem of a monocot. "What did the dots represent?" Fibro-vascular bundles. Then a full explanation was wanted as to the use of the bundles, and the difference in bundles of monocots and dicots, with questions on gymnosperms and conifers. "What is that?" "That" was half of an apple, the different parts being explained; and "What is a strawberry? Why do you call it a spurious fruit? What is the real fruit of the strawberry?" A few more questions on fruits was followed by "What is respiration? When and where does it take place? and of what use is it?" I was shown a piece of a hollow stem of a graminaceous plant, and questioned as to why it was hollow, and about the scars left by the leaves. A few minutes sufficed for this subject. In about five minutes I was called up to receive the congratulations of the President.

Dispensary Pharmacy.

DR. THEODORE LANSETT, the eminent dispensary-physician and club-doctor, lectured last evening to the students of the Sawbones College, and gave an interesting and instructive paper, entitled—

An Estimation of the Value of Pharmaceutical Knowledge to the Medical Profession.

He said, according to the rules of the present medical curriculum, it was necessary that some four or five months of their five-year term should be spent in the acquisition of a knowledge of pharmacy. This knowledge, he maintained, was of little or no value to them in the pursuit of their profession. He had not come to this conclusion hastily, but after a profound study of dispensary and club pharmacy, an intimate knowledge of which he had acquired from long practical experience. He had no hesitation in stating, as his unprejudiced opinion, that those five precious months might be much more profitably spent, and pharmacy replaced by some far more useful subject. He could not specially recommend any particular subject, but would suggest the "development of sixpenny surgery" as a study much more in accord with modern ideas. There could be no question, at any rate, that the acquirement of an art which to them was almost useless was a waste of time and cerebral tissue.

The practice of pharmacy consisted in putting together various drugs and chemicals in the form of a mixture, a compound powder, or an ointment, as the case might be. These and their preparations might be obtained ready for use from wholesale drug-houses, and why it should be necessary to spend five valuable months in learning how to mix these together he quite failed to understand. For surely it must be obvious that, to anyone who had been taught the hieroglyphics of a graduate and the intricacies of a pair of scales, the simple mixing of one or two drugs in a bottle with water, or in a mortar dry, or on a slab, was simplicity itself. Now, the teaching of graduate-signs and the different weights for the balance was merely a matter of a week or two, and he was proud to say that on several occasions he had experienced no difficulty whatever in converting a somewhat clod-like message-boy into an experienced and capable dispenser in the course of a month or six weeks. His wife also, he was pleased to say, was proficient in that line, and his cook had frequently manipulated a sacch.-ust.-cum-mag.-sulph. mixture in a strictly orthodox and capable manner.

He believed that some members of their profession (he was glad to think they were in a considerable minority, however) sought to obtain a cheap notoriety by writing prescriptions and upholding the pharmacist. This he considered to be a distinct lowering of the professional status; he strongly deprecated all such action, and trusted that the budding medicos there present would in no wise follow such deplorable precepts. For whereas they, by years of study, experiment, and self-denial, attain in course of time to the dignity of a profession, these pharmacists are merely shopkeepers and outside the pale of professional recognition. They merely ape our methods, developing so-called scientific associations and annual conferences, whereby they endeavour to cast a sort of mysterious scientific halo around their dispensing-counters.

In the pursuit of our profession, said the lecturer, we come across many instances of the conceit of these pharmacists, and it is astonishing to find how difficult it is on occasion to make it appear that they are in the wrong. Not long ago, happening to be called to a case at considerable distance from his surgery, he thought to save time by writing a prescription for the patient so that the medicine might be administered as soon as possible. It was a simple mixture of subnitrate of bismuth and carbonate of soda, but, needless to say, he was not satisfied with it when it was shown him on a subsequent visit. It had been procured from the leading chemist in the place, but it lacked that lumpy, muddy, appearance the profession are accustomed to see in their bismuth-mixtures, and, strange to say, it required but little shaking to keep it in suspension. This was a most suspicious circumstance, and he (the lecturer) resolved to dispense it himself. So a messenger was sent to his surgery and waited while he shot in a little bismuth and a little soda into the water in the usual way.

The bottle filled and wrapped, he told the boy to shake it up occasionally on the way home. The messenger returned presently with the fragments of the bottle and an incised wound at the edge of the left eyelid. The bottle had been broken through some carelessness, but the boy vehemently asserted that it had burst in his hands—a statement which was manifestly absurd. He dressed the wound and made another mixture; but, unluckily, that one came to grief also at the patient's house, and the chemist who had the temerity to dress the fingers injured on that occasion had likewise the impertinence to say that the mixture had been improperly dispensed, and an explosion had been the result. Of course, it would have been *infra dig.* to argue on a point of this sort with a non-professional. All that could be done was to maintain a dignified silence and change the constituents of the mixture.

Instances might be multiplied in which the pretended knowledge of the pharmacist was supposed to aid in the administration of medicines, but these all run on similar lines, and need not be recounted. They were merely inventions of that individual himself, who would have doctors keep qualified dispensers, and hints that their guesswork is not equivalent to the pharmacist's accuracy. Some have been known to assert that liniments, lotions, and poisonous drugs ought to be sent out in blue-glass poison-bottles, but this, of course, was ridiculous. Others hold that it is advisable to put a "shake" label on a prussic-acid mixture, and that powders should be weighed out separately, and not divided by hand and eye. In fact, there seemed to be no limit to the absurdities which these people would propose; but it was gratifying to know that very little attention is paid by any member of our class to such paltry particulars.

The practice of our particular branch of the profession, proceeded the doctor, soars high above considerations of accuracy or taste. We have reached the plinth of medical profundity, and the law of supply and demand does not include accuracy or even honesty in its precepts. So long as our stocks of mag. sulph. and sacch. ust. hold out, let us diagnose and dispense for suffering humanity, and collar the nimble sixpence while we may.

Therefore, let us rest content in our pharmaceutical ignorance, for a knowledge of pharmacy and the art of prescribing is no factor in the practice of our profession. It is merely an ornamental perquisite wedged into a corner of our curriculum, and evidently intended to lend an artistic finish to our training. Let us look well to our stocks of liquor cocci and our concentrated infusions. "Use your graduates as seldom as possible, and in time you may aspire to the possession of a surgery and a trap, and will duly acquire that owl-like solemnity of visage which is the outward and visible sign of the immaculate wisdom of our noble profession."

The lecture was enthusiastically received, and the doctor was cordially thanked for it at its conclusion.

JAMES BUCKMAN, the President of the Philadelphia Drug Company, has an educated cat, named Maceo, which is remarkable for his jumping abilities, as well as for his sociability and appetite. Maceo shakes hands, turns somersaults and other tricks. He has an especial fondness for soda-water, which he prefers through a straw, but Mellin's food is his chief delight. Mr. Buckman says Maceo is one and one-half year old, weighs ten pounds, and he values him at $125 per foot.—*American Druggist.*

To the aspiring skater who strikes his head violently on the ice, or to the party who happens to tread on a piece of orange-peel and "sees stars," it may be interesting to know that the cause of this curious phenomenon is found in a peculiarity of the optic nerve. The function of that nerve is to convey to the brain the impression of light, and it is susceptible to no other impression. The pain of the blow on the eye or the fall on the head is realised through the nerves of general sensation; but, insusceptible to pain or any other feeling, the optic nerve sends to the brain its report of the shock by flashes, sparks, and "stars."

Notice to Retail Buyers.

It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk, and, for crude drugs, without charges.

42 CANNON STREET, E.C., *April* 14.

THE EASTER HOLIDAYS still dominate the spirit of the markets, and comparatively little business has been passing this week, so that we have not many changes to report. Considering the condition of affairs between Spain and the United States, it is astonishing how little the markets are affected, although we hear from our New York correspondent that there the prices of articles known as contrabands of war—such as sulphur, saltpetre, and nitrate of soda—have considerably advanced; but we fancy if the Americans mean to lick Spain they must use explosives of a more modern character than those compounded with sulphur and nitre. On this market it is glycerine, nitric acid, and guncotton solvents which have chiefly been affected in price. Quinine seems immovable, or, as one manufacturer expresses it, "no worse." The following are the principal changes to be noted since our last:—

Higher	Firmer	Lower
Balsam Tolu	Cloves	Benzols
Jaborandi leaves	Copaiba (Para)	Caustic soda
Phenazone	Copper sulphate	Aniline oil and salts
Sarsaparilla (Mexican)	Oil, castor	Naphthas, solvent
Senna	Oil, cod-liver	Turpentine
Wax (Japan)	Phenacetin	
	Soda nitrate	

CABLEGRAMS.

BERGEN, April 14, 4 P.M.:—The Lofoten fishing is still being continued with fair results, but the catch in the Finmarken districts is so far small. The total catch of fish up to date is 25,013,000, against 41,775,000, equivalent to 16,260 barrels of oil, against 24,000 last year. The market is very quiet, and the quotations are unchanged at 82*s.* per barrel, f.o.b. Bergen, for non-congealing medicinal oil. The tendency is firm.

* * * *

HAMBURG, April 14, 11 44 A.M.:—Cod-liver oil has taken an upward turn; 87m. per barrel is now asked for 1898 non-congealing oil. Wormseed firm at 40m. per 100 kilos. Refined camphor is quiet at 240m. per 100 kilos.

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NEW YORK, April 7, 2.59 P.M.:—Opium is a strong market at $3.10 to $3 15 per lb. Quinine has been in more active demand at 18c. per oz.; on the other hand spermaceti is lower at 26c. per lb. in 100-case lots; mandrake (Podophyllum root) is also easier at 4½c. Californian honey is advancing, 5½c. per lb. being now asked. Mexican sarsaparilla is firmly held at 6½c., but an advance to 8c. is looked for.

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NEW YORK, April 14, 2 34 P.M.:—Balsam tolu is scarce and in demand at 38c. per lb. Cascara sagrada is offered at 4½c. to 5c. per lb.; cherrybark, at 5c. to 5½c. Goldenseal-root (*Hydrastis*) has been advanced to 45c. per lb. H G.H. American oil of peppermint is weak at 110c. per bottle. Sassafras oil is obtainable at 40c., and spermaceti at 62½c. per lb. American bleached beeswax is firm at 28c. to 29c., and Tampico sarsaparilla has been advanced to 6c. per lb.

Californian Honey. According to reports to hand from California, there is likely to be a short honey-crop this year. In consequence of this there has been a speculative demand in New York, and the market has advanced by ¼c. to ½c. per lb., the present quotation for light amber being 5½c., and for white 5¾c. to 6c. The industry in California has made rapid strides within the past few years, but up to the present the consumptive demand has kept pace with it. The output regarding the supply available for the season now at hand is put down at 500 cars—say, 2,500 tons—but it is difficult to obtain any definite idea, as, though answers to inquiries from New York indicate that the coast is almost bare, there are others who believe that there is plenty of honey to be had, and that supplies are being held back in the hope of higher prices.

Tunis Trade. A general order, dated April 4, has been issued from the London Custom House, relating to the requirement of a certificate of origin for certain goods imported into Tunis from countries whose products are entitled to be admitted at the lowest Customs tariff of that country. The following goods, among others, will be entitled, if accompanied by evidence of origin—viz., pistachio nuts, seeds, vegetable oils, pepper, cinnamon, cloves, benzoin, olives, cochineal, indigo, cassia lignea, nutmegs, vanilla, gums, resins and other resinous products. It is generally understood that "the country of origin of a product is that in which it has been manufactured or grown. Consequently, when such product is imported into a country other than Tunis, and having there paid Customs duties is subsequently imported into Tunis, it should be considered as having in no sense lost its claim to be a product of the country from which it was originally exported." When goods requiring a certificate of origin are inadvertently imported without one they may be liable to the general tariff.

Ceylon Exports. The following figures indicate the total exports of some of the more important Ceylon products from January 1 to March 15, 1898:—

	Cinchona		Cardamoms	Citronella Oil	Cinnamon Oil
	1898 lbs.	1897 lbs.	lbs.	lbs.	oz.
To U.K. ...	131,990	16,273	69,176	105,218	28,224
,, Germany	—	—	24,346	3,785	—
,, India ...	—	—	6,654	—	—
,, America...	29,448	58,547	—	199,592	—
,, Africa ...	724	—	—	240	1,063
,, China ...	2,026	12,535	720	—	—
,, Singapore	—	—	400	—	—
	164,188	87,355	101,296	310,822	29,287

The New B.P. The approaching publication of the new British Pharmacopœia has been agitating the wholesale drug-trade this week, and although the new work will not be published until May, the changes made upon the raw materials will affect Mincing Lane purchases before then. However, they are by no means numerous, and it may be useful for merchants if we briefly note the changes. First it is to be observed that the three kinds of buchu formerly official are now reduced to the kind commonly known as "round leaf," and derived from *Barosma betulina*. For generations, extract of Socotrine aloes has been preferred by English prescribers and pharmacists to other varieties; but while the Pharmacopœia retains the crude aloes, it has abolished the extract, and this may lead ere long to a diminished demand for the article. Only the decorticated liquorice-root is to be used in making medicines in the future, and it may interest those who handle indiarubber to know that the English mustard-leaf is to be made in future like the American, with Para rubber solution instead of solution of guttapercha, which we fancy will mean a shilling or two more brokerage in Mincing Lane in the course of a year. It would be an advantage if a representative of the Mincing Lane drug-trade were associated with the Pharmacopœia revisors, because they do not seem to be able to get to bottom facts regarding every drug. For example, the 1885 Pharmacopœia prescribed rhatany-root to be obtained from two distinct plants, one yielding what is generally known as Peruvian rhatany, and the other Savanilla rhatany. Now what is wanted is a Para rhatany and Peruvian rhatany, and as it is supposed that Para rhatany makes better preparations than the Peruvian, perhaps a South American importer may be able to lay his hands upon that kind, which has not been seen in Mincing Lane for years, if ever. Respecting ipecacuanha, we observe that the Pharmacopœia has declined to recognise the Cartagena root. This decision has been arrived at after much thought, and in future it will be awkward if any home-druggist is seen buying this root. Dried orange-peel is not to be allowed in making the tincture of orange, but has not been taken out of the B.P., and, for the first time, "benzoin, B.P.," is said to be known in commerce as Siam and Sumatra benzoin. In regard to nearly all drugs and oils to which chemical tests can be applied, the Pharmacopœia has laid down such tests, and home-buyers must in future endeavour to get the raw produce of the quality defined in the Pharmacopœia. For example, asafetida (that is the correct way of spelling it now) must not contain more than 10 per cent. of earthy or stony matter—that is, "ash." Elsewhere in this issue are numerous notes upon the work, and in future numbers we shall deal fully with all the new products and all alterations in old drugs mentioned in the Pharmacopœia. The use of milk sugar for diluting extracts will not overwhelm the manufacturers of that article.

Citronella Oil.

Mr. A. W. Winter, writing to a Ceylon contemporary, states that the old citronella grass is said to have been introduced to Ceylon by his grandfather, the late Mr. George Winter, of Baddegama, from the Straits or the coast of India, and the oil known in the market as Winter's citronella oil is extracted from this grass, which can only be grown profitably on good soil, and being a surface-feeder requires a fairly good rainfall. After the oil is extracted the grass is readily eaten by cattle, and is a very good manure. The so-called citronella "Lana Batu," now generally cultivated in Ceylon, is quite a different variety of grass, said to have been first found growing wild in a village of that name in the Matara district. In Mr. Winter's opinion, it is a hybrid between the real citronella and a wild grass. "Lana Batu" yields a larger quantity of grass, but bulk for bulk gives less oil than the old grass. Both grasses flower in the months of September and October, and in rare cases the seeds germinate. The leaves of the old grass are broader, softer, and droop more than the new variety. Very little, if any, of the old grass is now grown in Ceylon except by Mr. Winter's firm.

Curacoa Aloes.

The exportation of aloes from the island of Curaçoa during 897 was a dull and unprofitable trade, according to the British Consul's report (F.O. No. 2,047, 1½d.) As is generally known, Curaçoa itself produces but a small proportion, it being the place whence the drug is brought into commerce, and from which it takes its name. The Curaçoa aloes is nearly all produced in the islands of Aruba and Bonaire, which with Curaçoa form a small group of islands on the northern coast of South America. The article is either brought in transit to Curaçoa or to serve as a remittance in payment of general merchandise which the sister islands receive from it in return. In recent years it has been "overcharged" with a duty imposed both on the producers or exporters in the other islands of the colony, and also on the buyers and exporters at Curaçoa, which, as the Consul observes, is a most contradictory method of promoting the export-trade. A commission (including H.M. Consul) was appointed by the Governor of the colony "to make the tariff for the calculation of the tax on the import of general merchandise" at Curaçoa for 1898, and in consequence of the disadvantage regarding the export of aloes, the Consul recommended a reduction of the import-duty to ½ per cent., and a motion to this effect was carried. The report, however, does not state whether it was made absolute, or what the previous tax was. The following figures relate to the imports of aloes at Curaçoa:—1894, 13,085 kilos. (28,787 lbs.), value 1,698fl. (141*l.*); 1895, 46,041 kilos. (101,290 2 lbs.), value 7,356fl. (729*l.*); 1896, 35,870 kilos. (78,914 lbs.), value 3,189fl. (266*l.*) The exports of aloes from Aruba in 1897 were:—1894, 52,942 kilos. (116,472 4 lbs.), value 3,199·52fl. (2,516*l.*); 1895, 148,855 kilos. (327,481 lbs.), value 8,931·30fl. (744*l.*); 1896, 195,125 kilos. (429,275 lbs.), value 11,707·50fl. (975*l.*). From the same report we learn that the export-trade in phosphate of lime from Aruba has increased by about 55 per cent. above 1896, Great Britain continuing to be the best market, while formerly the greater part went to Germany. The figures were:—Great Britain: 1896, 4,608 tons; 1897, 7,254 tons. Germany: 440 and 448 tons respectively. None was exported from Curaçoa.

ACETONE is firm, and scarce for early delivery. The demand is so entirely dependent upon political events, that it is difficult to estimate how the article will go. In short, it will follow political movements.

ACID, CITRIC.—English makers now quote 1*s.* 0¾*d.* per lb. for crystals on the spot, and there are no sellers forward.

ACID, TARTARIC.—English is firm at 1*s.* 1*d.* per lb. for crystals on the spot, and at 1*s.* 0⅜*d.* for foreign crystals.

AMERICAN DRUGS.—An improved demand for American drugs is apparent, as buyers feel that in the event of war there may be difficulty in obtaining supplies of certain articles, such as senega and cascara sagrada, which are harvested about this time of the year, and up to the beginning of the summer. It is believed that the stocks of most drug-staples in the United States are not large. The present inquiries have not resulted in much business, nor have prices been affected. We give the current quotations for the principal American drugs in succeeding paragraphs.

BALSAM CANADA.—Little doing in this, at unchanged prices.

BALSAM COPAIBA.—There has been more inquiry for Para, which has gone firmer, 1*s.* 9*d.* to 1*s.* 10*d.* per lb., c.i.f., being to-day's price.

BALSAM TOLU.—In consequence of the somewhat firmer position in New York 1*s.* 9*d.* per lb. c.i.f. is now asked.

BAYBERRY.—Root bark is 1*s.* 0⅞*d.* to 1*s.* 2*d.* per lb., c.i.f.

CALUMBA.—Business has been done in fair natural root at 27*s.* to 30*s.* per cwt., but there is no more at that figure, and holders of 300 bags want 37*s.* 6*d.*

CAMPHOR (CRUDE).—Business remains inactive. Japanese is offered at 90*s.* to 92*s.* 6*d.* per cwt., c.i.f. terms, for April-June steamer shipment, and Chinese at 84*s.* 6*d.*, same position. Hong Kong advices, dated March 4, report that a fair business has been done for shipment to Europe in Japanese camphor, without change in the quotations.

CASCARA SAGRADA.—The regular price is 20*s.* per cwt., and reports from the other side favour the view that lower rates are unlikely.

CINCHONA.—The Amsterdam bark-auctions to be held on May 5 will consist of 6,598 bales manufacturing-bark, 199 bales and 8,289 cases druggists' bark. The stock in Amsterdam in first hands on April 13 consisted of 2,018 packages Government culture and 16,770 packages private culture, including the quantity to be offered at the above auctions.

CIVET of good quality can be bought at 17*s.* per oz.

COCA-LEAVES.—The London market is flat, fair Truxillos being offered at 6*d.* per lb. nominally. The following figures show the number of bales exported from Java during the last five years from January 1 to December 31:—

1897	1896	1895	1894	1893
1,105	1,046	1,371	731	—

COLOCYNTH in fair supply, but with little demand. Good Turkish apple may be had at from 1*s.* 1*d.* to 1*s.* 2*d.* per lb. on the spot. The exportation of colocynth from Jaffa was greater in quantity in 1897 than in 1896, but less in value, 44,000 lbs. having been shipped in the former year, of the value of 1,000*l.*, as compared with 33,335 lbs. of the value of 2,500*l.* in 1896.

COPPER SULPHATE.—Last year the Rio Tinto Company produced and sold 1,050 tons of sulphate of copper.

Cubebs.—The exports from Java during the past five years, from January 1 to December 31, were as follows:—

	1897	1896	1895	1894	1893
Piculs ...	7,281	1,878	5,399	4,634	3,244

Ether.—Our reports from Germany state that still higher prices are obtainable there. The following are the prices of English-make from methylated spirit:—·750, 6$\frac{3}{4}$*d.* per lb.; ·730, 7*d.*; and ·725, 9$\frac{1}{2}$*d.* per lb.

Euonymus.—Good wahoo root bark, 7$\frac{1}{4}$*d.* to 7$\frac{3}{8}$*d.* per lb. c.i.f.

Glycerin still remains at 51*s.* per cwt. for redistilled, sp. gr. 1·260, and closes firm on the spot.

Golden Seal.—*Hydrastis Canadensis* is now in fair supply at 1*s.* 9*d.* to 1*s.* 10*d.* per lb., c.i.f. terms.

Ipecacuanha.—The large arrival of Rio root last week appears to have somewhat depressed the market, and there is no business to report. It would be possible to buy good sound Rio root at 7*s.* 9*d.*; for Cartagena 6*s.* 3*d.* to 6*s.* 6*d.* per lb. is asked.

Liquorice-root.—Although the supply is not by any means large the demand is less. Decorticated root is offered at 20*s.* per cwt. and upwards on the spot, according to quality

Menthol is firmly held at 7*s.* 3*d.* per lb. on the spot, at which figure small transactions are reported.

Morphine.—Very quiet. It is possible to buy large quantities of hydrochloride at 4*s.* for powder in bulk.

Oil, Caraway-seed.—Finest English, 5*s.* per lb.; foreign, 3*s.* 10*d.* to 4*s.* 6*d.*, according to holder.

Oil, Cassia.—Reports from Hong Kong, dated March 5 state that oil of a low percentage is in good demand for Japan at full prices. The fortnightly sales amount to 40 piculs, with a stock of 150 piculs.

Oil, Castor, is in fair demand at unchanged prices, except for the heavy Belgian oils, which are 10*s.* to 20*s.* per ton dearer. Calcutta advices, dated March 17, state that prices have been advanced, though the demand has been only limited. The stocks and output at Calcutta continue to be small. Inquiries from the home markets have been, practically *nil.*

Oil (Cod-liver).—Dull. The London market has been easier than the Bergen and Hamburg markets, a fact due to the holdings of old oil in London being somewhat heavier than those on the Continent. The largest sales this week have been made of a well-known brand at 87*s.* per barrel, c.i.f., and for last year's make of the same brand 77*s.* is asked, but that price would be shaded, as there have been sales of old oil at 75*s.* To-day Bergen dealers and makers have cabled to their London agents advances of 10*s.* per barrel, and although 87*s.* is the lowest quotation for new oil less would buy. The finest brands range up to 5*l.* per barrel. Our Bergen correspondent, writing on April 9, confirms the telegram which we pubished last week, and states that the Lofoten fishing is still going on in the Western parts, and will be continued for another three weeks, although the fish have now begun to make their way northward, and catches are daily becoming smaller and smaller. The Finmarken fishing has just commenced, and little can be said about it one way or another, especially as the catch there is of little importance until the beginning of May. The price of best medicinal non-congealing oil in Bergen remains at 82*s* per barrel, f.o.b. The official statement of the cod-liver oil production in Lofoten up to April 9 is as follows:—

1898 Hectol.	1897 Hectol.	1896 Hectol.	1895 Hectol.	1894 Hectol.	1893 Hectol.
9,271	16,970	8,346	12,050	11,597	18,550

A fair business has been done this week for export to America in new and old oil.

Oils, Fixed.—Rape is quiet on the spot at 22*s.* to 22*s.* 3*d.*; refined at 23*s.* 6*d.* per cwt. Ravison, 18*s.* 3*d.* Cotton steady on the spot at 13*s.* 1$\frac{1}{2}$*d.* for crude, and 14*s.* 6*d.* to 15*s.* per cwt. for refined. Ceylon cocoanut, 23*s.* in pipes; Cochin, 27*s.* 6*d.*; fine Lagos palm oil, 23*s.* per cwt. Linseed unchanged at 15*s.* 6*d.* landed terms in pipes, or 15*s* 9*d.* in barrels on the spot.

Oil, Dill-seed.—German, 8*s.* 6*d.* to 9*s.* per lb.

Oil, Lemon.—Good commercial quality is being offered in one quarter at as low as 3*s.* per lb., though the general quotation is round about 4*s.*

Oil, Patchouli.—Genuine, 22*s.* to 24*s.* per lb. net.

Oil, Peppermint.—HGH oil comes somewhat easier from the other side. On the spot 5*s.* 6*d.* per lb. is nominally asked, and other brands of good quality are offered at from 3*s.* 6*d.* to 3*s.* 10*d.* per lb., according to holder.

Oil, Pine Sylvestris.—1*s.* 6*d.* to 1*s.* 9*d.* per lb.

Olive Oil.—Advices from Mitylene dated March 31 state that the damage by frost to olive-trees in the island is incalculable, and can only be compared to that wrought by the same cause just fifty years ago, in 1848. Most of the olive-trees in the surrounding districts have been killed. Vineyards have also greatly suffered, and there has been wholesale destruction of orange, lemon, apricot, and almond trees.

Orris.—A quiet but steady market, without change quotations.

Phenacetin.—From 3*s.* 6*d.* to 3*s.* 9*d.* per lb., according to quantity. The market is slightly firmer on account of the fact that there is less competition in the article.

Phenazone.—To-day the makers have spontaneously and independently increased the price by 1*s.* per lb. Swiss make is now 16*s.* 6*d.*; German, 17*s.*; and French, 18*s.* per lb. There is a talk of a combination in the article, but the present rise is due to the scarcity and enhanced value of aceto-acetic ether, one of the principal raw materials used in the manufacture. Were it not for this there would be every prospect of lower prices for phenazone in the near future, as several German chemical-manufacturers are making preparations to start manufacturing as soon as the German patent expires.

Podophyllum.—Selected autumn mandrake-root is offered at 2$\frac{1}{2}$*d.* to 2$\frac{5}{8}$*d.* per lb., c.i.f. and 22*s.* 6*d.* per cwt. to arrive.

Potash Carbonate.—Much of the carbonate which now comes on the market is made from molasses, and the production could be practically unlimited, but owing to a comparatively small demand, it is still under restriction and 90-per-cent. carbonate can be obtained at 16*l.* per ton on the spot.

Potash Permanganate.—Unchanged, and at present in poor demand.

Quinine.—The market remains in the weak condition which it assumed before Easter. Business has been done in second hands at 8$\frac{3}{4}$*d* per oz., but to-day sellers are stiff at 9*d.*, and German makers have done business at 9$\frac{1}{2}$*d.* On April 6 the price of Pelletier's brand was reduced 1*d.* per oz., to 1*s.* 3*d.* The tone inclines firmer, in view of the Americo-Spanish difficulty, but it is well to remember that stocks of quinine in the United States must be large.

Resin.—Strained on the spot, 4*s.* 9*d.* to 4*s.* 10$\frac{1}{2}$*d.* per cwt.

Saffron.—There is no change to report. The market has now settled down until the next harvest. We have had a conversation with a large merchant as to the probable effect of the deletion of saffron from several pharmacopœial articles, but he says that it will have absolutely none. Druggists do not buy a hundredth part of the quantity that users outside the drug-trade purchase, particularly for dyeing-purposes.

Salicin.—The manufacturer's price is unchanged at 10*s.* to 10*s.* 6*d.* per lb., according to quantity.

Sarsaparilla.—Fine bright thick Honduras of extra quality is offered at 1*s.* 4$\frac{1}{2}$*d.* to 1*s.* 5*d.* per lb., c.i.f. Genuine Jamaica root is very much wanted. Lima root is quiet at 1*s.* 4*d.* per lb. on the spot. There have been sales of Mexican at 4$\frac{1}{2}$*d.* per lb. c.i.f., which is a trifle higher.

Scammonium.—Virgin firsts are offered at 25*s.* to 27*s.* per lb., and Syrian lump has been sold at 16*s.*

Seeds.—There is more business doing in *Anise*, at 19*s.* 6*d.* per cwt. for Mediterranean, but nothing in Russian, either on the spot or to arrive. There is more inquiry for the finer qualities of *Canary-seed*, and sales have been made of clean Barbary at 28*s.*, and of bold Tangier at 32*s.* per quarter. *Coriander* is steady, at 8*s.* 6*d.* per cwt. for good Morocco; and *Fenugreek* is quoted at 12*s.* per cwt.

Senega Root.—The spot price is 1*s.* 2*d.* per lb., but there is no business to report at this figure. Sales have been made at $11\frac{1}{4}$*d.* per lb. c.i.f.

Senna.—The demand for Tinnevelly continues, and holders are firmer in their views, prices about 25 per cent. to 30 per cent. in advance of the last drug-auction rates having been asked for low to medium grades; but it is just possible that notions of value will undergo some change when the quality of the 291 packages which the *Caledonia* will land on Saturday has been ascertained. We understand that this consignment consists, in part at least, of old stock, and that the whole of the present buying is to satisfy a legitimate and immediate consumptive demand. America is buying well, and appears to be not yet satisfied.

Shellac.—Little business has been done during the week owing to the Easter holidays and absence of auctions. On the spot small sales of second Orange have been made at 60*s.* to 61*s.* per cwt. for middling to fair, and octagon B at 91*s.* 6*d.* to 93*s.* per cwt. TN, August delivery, is offered at 64*s.*, with buyers at 63*s.*; April-June shipment, 60*s.* to 61*s.*, c.i.f., but no business is reported. Calcutta reports a dull market all round, with small sales of TN quality.

Spices.—There were no public sales on Wednesday, and the business done privately has been very small, but prices are practically unchanged. *Pepper*: both black and white are dull of sale. Zanzibar *cloves* firm, but nothing doing, the value of June-August delivery being $4\frac{1}{32}$*d.* per lb. Offers of Japan *ginger* to arrive are still above our market. The spot price is 18*s.* to 19*s.* Letters from Calcutta, dated March 14, report a firm market in ginger, with light stocks of old crop. No arrivals have yet come to hand in Calcutta of the new crop, and prices are nominal.

Sugar of Lead.—Foreign has recently been advanced, and now stands at 25*s.* per cwt., landed terms. For five to ten ton lots 23*s.*, c.i.f. U.K., is asked; brown, 15*s.* f.o.b. in five-ton lots; English, 30*s.* per cwt., landed.

Sulphonal.—Quiet and unchanged at 7*s.* 3*d.* per lb.

Sulphur.—Although there is no quotable change the market is tending firmer on account of a considerable demand for agricultural and viticultural purposes, and the supplies are somewhat limited for the time of the year.

Tragacanth.—Business has been on a small scale owing to the holidays, and the auctions which are to be held on April 15, when some 2,000 packages will be offered by three brokers.

Turmeric.—Bengal remains quiet at 14*s.* to 14*s.* 6*d.*, at which figures a small business has been done. Fair bright Madras finger is quoted at 19*s.*, and Cochin split bulb at 8*s.* to 8*s.* 6*d.* per cwt.

Turpentine.—American on the spot, 23*s.* 6*d.* to 23*s.* $7\frac{1}{2}$*d.* per cwt.

Wax, Japan.—Cable quotations from Japan come higher this week, as much as 35*s.* 6*d.* per cwt. c.i.f. being asked. On the spot good pale squares are obtainable at 36*s.* to 36*s.* 6*d.*, but there is little business to report.

Heavy Chemicals.

Business in the heavy-chemical market since last writing has been quite of a holiday character, and there are no features of exceptional interest to report. On the whole, a fairly steady demand for most products continues to exist, whilst prices are steadily maintained without much fluctuation. *Bleaching-powder* is unchanged, either as regards condition or price, but *Caustic soda* is just a shade easier, and in rather better supply. *Chlorates* are still very depressed, as are also all *Sulphocyanides*. *Yellow prussiate of potash* and *Recovered sulphur* in brisk request at unchanged values. *Sulphate of copper* has a slightly firmer tone, but Liverpool is still quoted 16*l.* to 16*l.* 5*s.* *Sulphate of ammonia* shows no improvement, and is very quiet; Beckton terms, prompt, 8*l.* 10*s.*; Beckton, 8*l.* 12*s.* 6*d.*; Hull and London figures are 8*l.* 15*s.*; and Leith, 8*l.* 17*s.* 6*d.* *Aniline oil* and *Salts* are dull, and prices tend lower. *Benzols*, too, are very quiet at lower figures; 90 per cent., 1*s.* to 1*s.* 1*d.*; 50 per cent., 1*s.* 1*d.* to 1*s.* 2*d.* *Solvent naphthas* a trifle easier. *Carbolic acids*, crude and crystals, steady at unchanged rates. *Nitrate of soda* is somewhat firmer; refined, 7*s.* $7\frac{1}{2}$*d.*; and ordinary, 7*s.* 6*d.* *Cream of tartar*, powdered and crystals, steady. *Acetates of lead*, brown and white, firm at late advance, and moving fairly well. *Linseed* and *Cottonseed cakes* very firm. *Phosphorus*, wedges and sticks, moving briskly. *Acetate of lime* maintains a firm position.

The Hamburg Drug-market.

Our Hamburg correspondent, writing on April 12, reports that business in general is very quiet owing to the holidays. *Cape aloes* is firm, at 48m. per 100 kilos. *Russian anise* quiet, at 39m. per 100 kilos. *Star-anise* dull and unchanged, at 220m. per 100 kilos. *Genuine Balsam Peru* is quoted at $16\frac{1}{2}$m. per kilo.; *Tolu* quiet, at 300m. per 100 kilos. *Cassia lignea* is steady; new standard quality at 80m. to 82m. per 100 kilos. *Cinnamon-chips* are firm, with a good demand. *Cocaine* is very quiet, at 300m. per kilo. *Calumba-root* is firmly held, at 60m. per 100 kilos. *Condurango-bark* is steady, at 47m. per 100 kilos. *Cascara sagrada* firm, at 37m. to 39m. per 100 kilos. *Cevadilla-seed* is unchanged and quiet, at 75m. per 100 kilos. *Ergot of rye* shows very little business; sound Russian is quoted 145m. to 150m., and Spanish at 190m. per 100 kilos. *Galangal-root* steady, at 42m. per 100 kilos. *Menthol* unchanged, at 15m. per kilo. *Refined camphor* is without business, at 240m. to 238m. per 100 kilos. *Cumin-seed* unchanged, at 38m. to 40m. per 100 kilos. *Opium* is steady, at $18\frac{1}{2}$m. per kilo. *Quinine* is neglected: the manufacturers reduced their prices last week to 24m. per kilo. *Quillaia-bark*: Prices are improving. On the spot 37m. to 38m. per 100 kilos. is now asked. *Carnauba-wax* is quiet; grey from 80m. per 100 kilos., to 140m. for fine yellow. *Japan wax* is unchanged and quiet. *Castor oil* is quiet; first-pressing on the spot is offered at 57m., and forward delivery at 54m. per 100 kilos. *Cod-liver oil* is very firm, but the demand at the present high prices is only small; 1898 oil is quoted nominally 90m. per barrel. *Russian anise oil* is obtainable at $14\frac{1}{2}$m. per kilo. *Star-anise oil* at $14\frac{1}{2}$m. per kilo. *Peppermint oil* unchanged: HGH at $5\frac{3}{8}$m. to $5\frac{1}{2}$m.; Todd. 5m. per lb.; Japanese, $6\frac{1}{4}$m. per kilo. *Clove oil* is firm, at 6m. per kilo. *Citronella oil*, 265m per 100 kilos.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on April 13, reports that the holidays have had the effect of depressing the volume of business considerably, but at the same time there has been a somewhat buoyant feeling in many articles, notably in *Castor oil*, which has experienced a sharp turn owing to the reduced stocks on the spot and the absence of offers from Calcutta and Marseilles. Good seconds Calcutta are firmly held at $3\frac{3}{16}$*d.* to $3\frac{1}{4}$*d.* per lb., and first-pressure French at $3\frac{3}{16}$*d.*, while little second-pressure offers. Considerable sales of *Jaborandi-leaves* have been made at an advance on the last prices paid, but the figures were not allowed to transpire. *Sulphate of copper* is in better request at 16*l.* 5*s.* per ton, with firm sellers. *Fenugreek-seed* is wanting, and an arrival just landing comes to a bare market; the owners talk of 10*s.* 6*d.* to 11*s.* per cwt., and 12*s.* 3*d.* is asked for Morocco. *Gums* are experiencing only a limited inquiry for Arabic sorts, and the sales are small at 75*s.* Medium grades are rather neglected. Brazilian meets with some little demand, but shares somewhat in the inactivity generally prevailing in gums, the sales resulting being small. *Quillaia bark* is firm at 19*s.* to 20*s.* per cwt., with a group of very firm holders both on the spot and to arrive. *Honeys* of all grades are firmly held, but no quotable change has taken place in the value of Californian and Chilian. *Beeswax* is selling at an advance for the week of about 2*s.* 6*d.* per cwt. for Chilian, 7*l.* 2*s.* 6*d.* being realised for 15 bags. *Russian anise* is firmly held for 18*s.* per cwt. First white *Cream of tartar* is still offered at 76*s.* to 77*s.* per cwt., with a demand which has sagged away somewhat. *African ginger* has fallen away, and sales of good root are reported at 18*s.* 3*d.* per cwt. For the limited supplies of *Irish moss* offering 15*s.* to 20*s.* is asked according to quality. *Canary-seed* is almost featureless at 26*s.* to 27*s.* per qr. for good bright Turkish. In *Calabar beans*, after the recent important movement there is a lull, and they are firmly held for 3*d.* per lb.

OPIUM.

Although little business has been done on the London market during the past week, the tone is getting firmer, and there is a disposition to predict an even stronger market in the near future. Druggists' and manufacturing kinds have been sold at full to slightly-advanced prices. Persian is quiet, as holders are now asking higher prices.

Our Constantinople correspondent, writing on April 7, reports that:—"The elements have not favoured the opium-crop this season. Snow, frost, rain, and now drought have all combined against the frail poppy, with results that require no repetition. One thing is now certain, that this year's crop will be an exceedingly small one, probably 3,000 cases, or under, and most certainly not over 4,000 to 4,200. Spring sowings should be in full swing now, but, owing to severe drought in all the principal producing-districts, little or no seed is being put underground. There are no signs of rain, unfortunately, and the outlook for all grains is very black indeed. The market is very firm, at the parity of 9*s.* 5*d.* to 9*s.* 6*d.* f.o.b. Constantinople, for Karahissar. Speculators are offering 9*s.* 3*d.* without avail. With a little consumptive demand a higher range of values would most certainly be established, but until this comes, and if, in the meanwhile, natives wish to maintain present level, or bring about a further advance, they must rely upon their own resources."

Our Smyrna correspondent, writing on April 1, reports that:—"The total sales during March amounted to 250 cases, 110 of which went to England, America, and the Continent—30 Dutch grades, and the balance held on this market by speculators. The arrivals of opium at Smyrna since June 18 last amount now to 3,391 cases, against 2,300 at same period last year, and in Constantinople, up to March 26, 1,849 against 1,541 in 1897. The stock of opium in Smyrna is now 2,756 cases (not calculating what is held on speculation), and in Constantinople 645 cases."

We learn that the first order from America was received at Smyrna with enthusiasm. It originally consisted of 100 cases, which was placed with the largest American buyer here, who purchased 19 cases Adette at the parity of 8*s.* 1*d.* per lb., f.o.b Smyrna, and 21 cases Karahissar at 8*s.* 3*d.* After the transactions had taken place, the possessors of orders for consumption awoke to the fact that they, too, must buy, and the last prices paid were as follows:—Current qualities, 8*s.* 4*d.* to 8*s.* 6*d.* per lb., f.o.b.; Karahissar talequale, 8*s.* 6*d.* to 8*s.* 8*d.*; Yerli ditto, 8*s.* 7*d.* to 8*s.* 9*d.*; ditto very fine, 9*s.* 2*d.*; slightly ditto, 8*s.* 8*d.*; Holland grades, 9*s.* 3*d.* The market closed firm.

ARRIVALS.

The following is a list of the principal drugs and chemicals which have arrived in the port of London, and other large ports in England, since our last report. The figures indicate the number of original packages (bales, casks, &c.):—

Aloes (E.I.)	149	Kola	15
Areca nuts	40	Liquorice-root	2,516
Balsams	20	Nux vomica	334
Benzoin	358	Oil, aniseed	20
Buchu	18	„ camphor	280
Cardamoms	196	„ castor	80
Caraway-seed	296	„ cinnamon	10
Cascara sagrada	1,062	„ cocoanut	2,415
Cassia fistula	40	„ cod-liver	388
Chamomiles	4	„ lemongrass	77
Cinchona	1,958	Opium	92
Cinnamon-bark	88	Orris-root	23
Colocynth	22	Patchouli	10
Cubebs	183	Quicksilver	100
Cumin-seed	27	Sandalwood	698
Dragon's Blood	3	Sarsaparilla	1
Fennel-seed	388	Senna (Alex.)	7
Fenugreek-seed	80	Soy	80
Galls	3,521	Tamarinds	263
Ginger	8,514	Tonca beans	1
Gum arabic	2,458	Turmeric	952
Gum olibanum	120	Wax (bees')	3,673
Honey	494	„ (Japan)	89
Kamala	3		

The smallest cell with which biologists are acquainted is the bacillus known as mouse septicæmia, which is 1 by ·02 micromillimeters in size.

Commercial Notes.

FRENCH TRADE.

According to H.M. Consul at La Rochelle (F.O. paper, No. 2,041, 1½*d.*), there is a diminution of demand for British manufactured goods in France, owing to the increasing tendency to manufacture everything in the country instead of importing. The great advantages possessed for cheap production in much lower wages, longer hours of work, and absence of labour troubles, has enabled French factories to turn out manufactures of good quality and moderate in price. The practice of sending circulars by post, says the Consul, is not only useless, but injurious to others, because the country buyer gets to learn the exact discount given, and uses it as a lever to reduce the price. The imports of phosphate of lime and chemical manures increased by 6,500 tons at La Rochelle, the greater part coming from the United Kingdom.

TRIPOLI TRADE.

The export of sponges from Tripoli were valued at 20,000*l.* in 1897, as against 28,000*l.* in 1896. This decrease was due to the fact (see Consular Report, No. 2,048, 1*d.*) that no Greek fishing-craft were allowed to engage in the sponge-fishery last season on the coast of Tripoli, owing to the war between Turkey and Greece. There is no direct import-trade between Tripoli and the United Kingdom, British manufactures destined for that market being transhipped at Malta and Tunis, chiefly in foreign vessels. The direct export-trade to Great Britain is carried on almost exclusively under the British flag, and is usually confined to one article—viz., esparto grass. Exports from and imports to Tripoli decreased in 1897, but as regards trade with the United Kingdom the downward tendency has only occurred in exports, which have fallen from 46 per cent. in 1896 to 37 per cent. in 1897, the imports remaining the same as before—viz., 32 per cent. of the total value. Great Britain, however, still holds the greatest share of the trade with Tripoli, both giving and taking more than any other country. Tripoli is under the direct rule of Turkey, and as the surrounding country is poor and thinly populated no great expansion of trade is looked for.

UNITED STATES FOREIGN TRADE.

An official report on the United States foreign trade for the seven months ended January 31, 1898, has been issued, which shows a decrease in the total imports of nearly $43,000,000, and an increase of $62,000,000 in exports. Among the articles showing a decided increase in the amount imported, as compared with the seven months following the close of the fiscal year 1896, with the amount of increase, are:—

Alizarine ...	lbs.	900,000	Liquorice-root	lbs.	4,000,000
Argol	„	1,500,000	Potash chlorate	„	300,000
Bleaching-powder ...	„	11,000,000	Potash muriate	„	15,500,000
Brimstone ...	tons	6,900	Quinine ...	oz.	780,000
Camphor ...	lbs.	400,000	Shellac ...	lbs.	580,000
Cochineal ...	„	8,000	Soda nitrate...	tons	14,500
Gum arabic ...	„	180,000	Pepper ...	lbs.	1,250,000

On the other hand, the articles showing an important decrease are:—

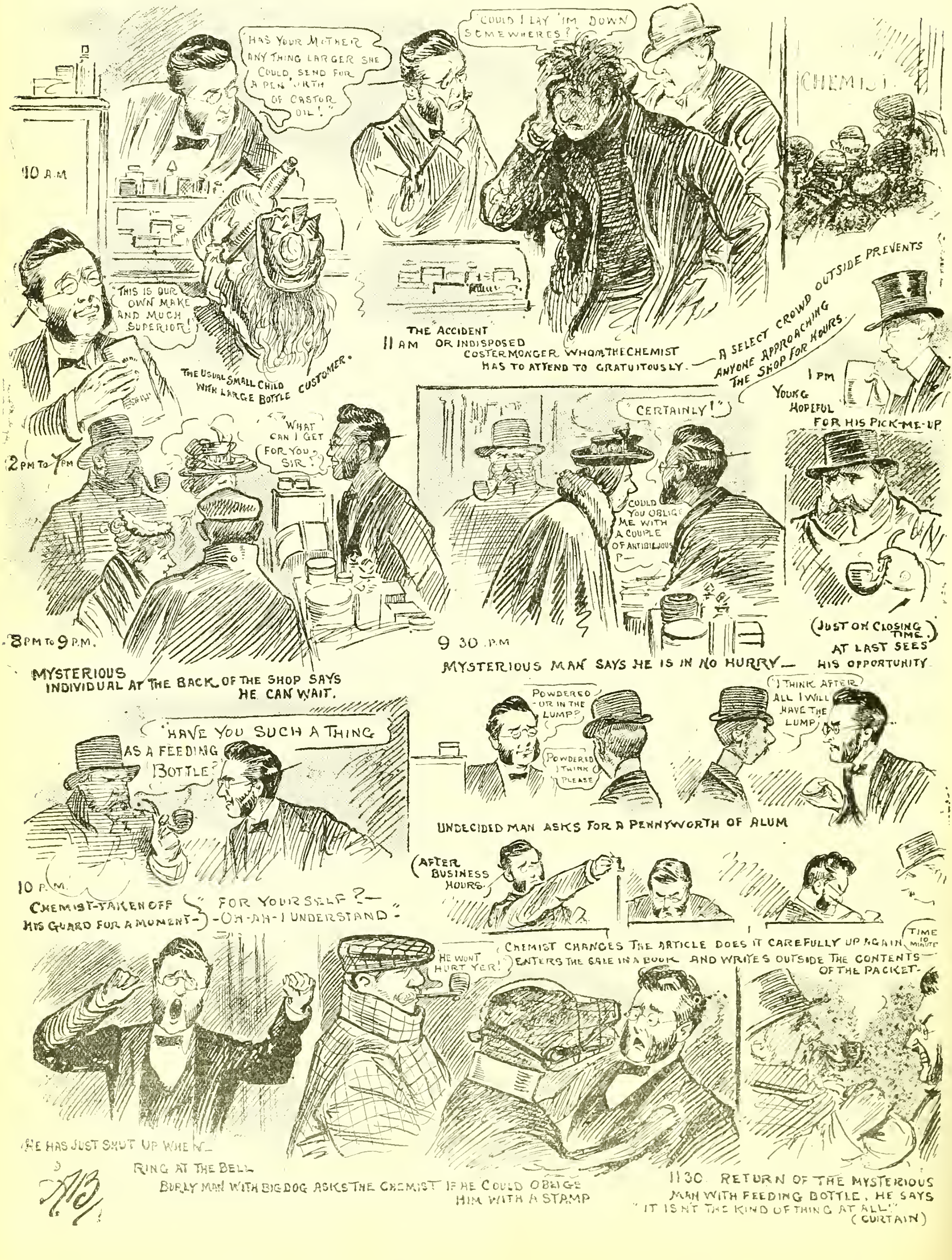
Caustic soda...	lbs.	10,700,000	Perfumeries, &c.		$ 79,000
Glycerin ...	„	1,600,000	Soaps		$ 92,000
Opium, crude	„	422,000	Soda ash ...	lbs.	27,000,000
Opium, smoking	„	27,000	Vanilla ...	„	24,000
Paints and colours ...		$ 20,000			

In exports, patent medicines increased by $222,000; glue, 324,000 lbs.; naphtha, 270,000 gals.; soaps, 1,000,000 lbs.; alcohol, 168,000 gals. The exports of glucose decreased by 3,000,000 lbs.; resin, 60,000 barrels; turpentine, 825,000 gals.; essential oils, $380,000; perfumery, &c., $15,000; quicksilver, 200,000 lbs.

Balsam Copaiba is imported from Para in kegs holding about 100 lbs. This is usually dirty and contains water, but one straining will free it from all foreign matter except water, which is expelled by heat.—*American Druggist.*

A Day with the Chemist.

(From *Moonshine.*)


10 A.M.
"HAS YOUR MOTHER ANY THING LARGER SHE COULD SEND FOR A PEN'ORTH OF CASTOR OIL!"
"THIS IS OUR OWN MAKE AND MUCH SUPERIOR!"
THE USUAL SMALL CHILD WITH LARGE BOTTLE CUSTOMER.
"COULD I LAY 'IM DOWN SOMEWHERES?"
CHEMIST
11 AM THE ACCIDENT OR INDISPOSED COSTERMONGER WHOM THE CHEMIST HAS TO ATTEND TO GRATUITOUSLY.
— A SELECT CROWD OUTSIDE PREVENTS ANYONE APPROACHING THE SHOP FOR HOURS
1 PM YOUNG HOPEFUL FOR HIS PICK-ME-UP
2 PM TO 7 PM
"WHAT CAN I GET FOR YOU, SIR?"
8 PM TO 9 P.M.
MYSTERIOUS INDIVIDUAL AT THE BACK OF THE SHOP SAYS HE CAN WAIT.
"CERTAINLY!"
COULD YOU OBLIGE ME WITH A COUPLE OF ANTIBILIOUS P—
9 30 P.M
MYSTERIOUS MAN SAYS HE IS IN NO HURRY —
(JUST ON CLOSING TIME.) AT LAST SEES HIS OPPORTUNITY
"HAVE YOU SUCH A THING AS A FEEDING BOTTLE?"
10 P.M.
CHEMIST TAKEN OFF HIS GUARD FOR A MOMENT — " FOR YOURSELF? — -OH-AH-I UNDERSTAND -"
POWDERED OR IN THE LUMP?
POWDERED I THINK PLEASE
"I THINK AFTER ALL I WILL HAVE THE LUMP"
UNDECIDED MAN ASKS FOR A PENNYWORTH OF ALUM
(AFTER BUSINESS HOURS.
CHEMIST CHANGES THE ARTICLE DOES IT CAREFULLY UP AGAIN, ENTERS THE SALE IN A BOOK AND WRITES OUTSIDE THE CONTENTS OF THE PACKET.
(TIME 10 MINUTES
HE HAS JUST SHUT UP WHEN —
HE WONT HURT YER!
RING AT THE BELL
BURLY MAN WITH BIG DOG ASKS THE CHEMIST IF HE COULD OBLIGE HIM WITH A STAMP
11 30. RETURN OF THE MYSTERIOUS MAN WITH FEEDING BOTTLE. HE SAYS "IT ISN'T THE KIND OF THING AT ALL!"
(CURTAIN)
A.B.

Correspondence

Notice to Correspondents. *In writing letters for publication correspondents should adopt a concise, but not abbreviated, style. They are requested to write on one side of the paper only. Letters, with or without a nom-de-plume, must be authenticated by the name and address of the writer. Queries should be written on separate pieces of paper, and the regulations printed under the sections to which they apply should be strictly observed.*

The Pharmacy Bill and its Opponents.

Sir,—May I be allowed to correct a few misapprehensions that have arisen with regard to my action *re* Pharmacy Bill?

As a correspondent of the Manchester Association, I arranged with Mr. Cross for an interview at the House of Commons with Mr. Gibbons. Unfortunately the Defence Association gave up before the interview came off, and Mr. Cross sent for me to explain him to my views.

This I did, confining myself exclusively to Clause 3, to which I objected, giving my reasons for the same, as stated in my previous letter. That anyone should take offence at what might be termed a matter of political difference shows a spirit of intolerance happily confined to a few. Should anyone feel aggrieved I tender my humble apologies; no offence was intended.

Lately private representations were made to me, by those who should know, that the passing of the Bill was of vital interest to the Society, and that, if not passed, the Society's interests would suffer greatly and further opposition would be hurtful to the best interests of the craft. I have no desire to do an injury, but merely seek to maintain my justly earned rights. I have therefore, somewhat reluctantly I admit, consented to withdraw my opposition to Clause 3. In conclusion, I would add that I conducted my opposition upon perfectly straight lines. Had I been guilty of the motives elsewhere accredited to me, it would have been a comparatively easy matter to raise animosities and antagonisms sufficient to put all chance of the Bill out of question.

Yours very truly,
Arthur McKellar.

As we go to press we receive a lengthy communication from Mr. D. Watson, Secretary of the Glasgow and West of Scotland Association, recounting (but in somewhat different terms to our report) the discussion between Mr. Sutherland and Mr. McKellar, based on the letter from the latter gentleman referring to the Pharmacy Bill which appeared in The Chemist and Druggist of March 26. The only additional information which Mr. Watson gives is that Mr. McKellar stated he had written to Mr. Cross, M.P., but that that gentleman had replied that he could not withdraw his opposition to the Pharmacy Bill till he knew what the Government Poisons Bill would do for the agricultural interests. Mr. McKellar admitted that he had also communicated with Mr. Caldwell, M.P., and Dr. Tanner, M.P.

The British Pharmacopœia (1898) and Wholesale Chemists.

Sir,—It has been announced, with I presume some semblance of official authority, that the British Pharmacopœia, 1898, would not be published for at least three weeks. Yet on April 9, 1898, a certain wholesale firm, a member of which is one of the Pharmacopœia Committee of the Pharmaceutical Society of Great Britain, issued a "Price-list of New and Altered Preparations, British Pharmacopœia, 1898. (Ready for delivery next week.)" Furthermore, the same firm is publishing "A Short Guide to the British Pharmacopœia, 1898. Ready on April 14."

Now I hereby protest, first, personally, against the want of fairplay and justice in conduct of this description, and, second, on behalf of wholesale chemists generally, on commercial grounds—*i.e.*, against being handicapped in their business to the extent they will be by this firm getting such a very considerable start of others. I may say that I was deeply incensed on seeing this price-list last night, and doubtless many more have the same feelings, especially those connected with the wholesale trade.

How any firm, apart altogether from motives of right and justice, but with even the most rudimentary idea of the "eternal fitness of things," could take advantage (as has been done) of the position which certain circumstances fortuitous or otherwise have placed them in to steal a march on their trade competitors, passes my comprehension. The General Medical Council is a body exceedingly jealous of the honour of members of the medical profession, and visits heavily any lapses from the strait path. It is to be hoped they are as jealous of the honour of those pharmacists who are temporarily associated with them, but over whom unfortunately they have no jurisdiction. The Council of the Pharmaceutical Society has such jurisdiction.

George Coull, B.Sc. (Edin.),
Leith, April 12. Pharmaceutical Chemist.

The Assistants' Union.

Sir,—I am a chemist in business, with several branches, and lately had occasion to advertise in your valuable paper for a manager for one of them. In reply to the one insertion I received nineteen applications, of which the great majority were from chemists formerly in business, but since ruined by the competition of big company "stores."

I felt, as I read these letters, what a crushing answer they provided to the argument of the qualified assistant who considers that by going as manager to these companies he is acting in his own interests. As a matter of fact, he is simply ruining his own labour-market, for each broken chemist becomes a manager also, and when the process shall have continued for a few more years there will be a dozen qualified "managers" for each post. Then will come down salaries below even the level of that of the butcher's man.

I have had vacancies before, of course, but never so many applicants, and not one-fourth the number of ruined men among them. I am not a "cutter"—at least not more than can be helped—and must recognise the fact that the business which now keeps me and my four qualified men could easily be condensed into one cutting-store under one of us only. Then, what about the others? Simply four more applicants for a managership, and that number of "berths" non-existent.

Looking at the matter as a practical man, and putting on one side the question of ethics, I think the qualified chemists are making a ghastly mistake in not combining. Combination has proved beneficial to all other workers, and why not to them? It is the fashion to sneer at trade-unionism; but, whatever its faults, it has done much to better the position of the workman and raise his standard of living. Its mistakes—and they are many—may be traced to the want of education, and such the chemist's assistant would, for obvious reasons, be less likely to make. Expensively educated and trained, the chemist attains a higher culture and acquires more taste and refinement than the artisan or the ordinary trader, but has he the "grit"? It costs him more to obtain his certificate than would set the grocer up in business, and yet he is so lacking in *esprit de corps*, so blind to his own future welfare, and so colossally foolish, that, often as not, he sells himself to a collection of petty capitalists who use his brains and qualification to destroy his own brethren and earn for them their 5 or 7 per cent.

I begin to think the drug-trade takes the fibre out of a man. I must contrast the chemist's assistant with his artisan fellow-countryman, and I know with which I would prefer to stand side by side in a dark and dangerous hour. There is no doubt that under the influences of long hours, little air, and town life men do degenerate, and to all these influences has the trade been exposed. No wonder that so many of its members are content to be slaves.

The gain of an hour's leisure per day, and a shilling or so per week, looks more important to them than a prosperous middle life and an independent old age.

It is with trades as with men and nations. They cannot escape the consequences of past misdeeds, and the drug-trade is paying the penalty of its crimes. But there is still time.

Let the chemist give his assistants as good a salary as that given by the "Stores"; let him give them as short hours and then he will deprive them of the only excuse they have for their treachery to their own class. I venture to prophesy that he (the assistant) will then, if he has the spirit of a man, refuse to sell himself to these pirates, and by so refusing give himself a chance in life.

Yours faithfully,
Sword. (141/42.)

Sir,—Whether chemists' assistants ought to combine in order to extinguish the stores is a question very soon answered by every well-regulated mind, but I advocate the establishment of a "Union" for other reasons. It appears from correspondence on this subject that the average remuneration of the qualified druggist's assistant is 6¼*d.* per hour. Although the majority of assistants look forward to being employers of labour, yet this should not deter them from making an effort to abolish the system of supplying the public with cheap drugs at the expense of the poor devil behind the counter. It is a system productive of no end of misery and sometimes even of dishonesty.

Yours truly,
Hydrogen Iodide. (143/36.)

Chemists' Windows.

Sir,—Some time back it was my intention of writing a line or two on the above subject. Owing to pressure of business, I had to postpone doing so; but on reading your valuable journal of this week, I see under the heading, "Our Town Traveller," some hints on window-dressing, representing another soap-show. Well, Sir, being only a poor suburban chemist, and not being the fortunate possessor of a City pharmacy, I visited the good old city of Dublin a short time back, and having transacted my business with the wholesale houses, I having a few hours at my disposal, thought to while away the time with pleasure, and perhaps profit to myself, by studying some of the windows of my fellow-craftsmen, in the hope of picking up some useful hints of pharmaceutical interest. With such thoughts I naturally bent my steps to busy Grafton Street, where I noticed a beautiful new shop-window, one that any chemist might desire, in place of the old one which in the good old days bore the name of a leading chemist over it, but since changed into a limited company. Well, Sir, imagine my disappointment to find this lovely window turned into a gaudy soap-show, decorated with ribbons, muslins, and flowers, though I cannot see why these should be put with this soap, unless it is to point out that this special brand will wash clothes, while the monkey brand will not do so. This same window, a short time back, was made the medium of a disgusting exhibition of a second-rate toy-shop, with the main figure representing a child automatically vomiting a frog. In other windows of this company are to be found a variety of useful articles, such as basins, ewers, mugs, and urinals of the familiar household type, and it will not surprise me if at fall of season there be a notice of a cheap sale of shop-soiled ribbons, muslins, &c. Well, Sir, leaving this window with grief and pain, I turned my steps to other busy thoroughfares, such as Sackville Street, Mary Street and Henry Street, alas! to find similar soap-displays. Now, Sir, I grant you in these hard times of cutting-prices, it is not so easy to earn 2*l.* per month per window, with a extra couple of pounds' worth of soap tacked on free to your order. Still I am old-fashioned enough to prefer (if I dress my windows) to do so with my own specialities, which I imagine would be more profitable, and, certainly, to my mind, more in keeping with our profession. I, Sir, was offered the inducements mentioned to make a soap-exhibition—it would be an exhibition—but refused so tempting an offer in the manner it deserved, and am glad to say others acted in a similar manner.

I am, dear Sir, yours faithfully,
A Poor but Proud Chemist. (144/6.)

Medical Education Spreading.

Sir,—A great change is coming over the times in which we live; customers now ask for something to relieve muscular rheumatism—the old rheumatics in the joints is done with. Last week one customer said he had chronic gastritis, and another gastric catarrh with tonsilitis, and said he had painted the fauces. My last beats all. Customer comes and is fitted with truss, told me he was ruptured in the pericardium, but did not know if the break was horizontal or perpendicular. Calling next day I asked if he was comfortable, and was told he thought the spring pressed too hard on the large bowel, as when he went to stool that morning he noticed that the fœtus came away in small pieces!

C. F. Smart.
Littlehampton.

The Lord Mayor's Hundred Sons.

Sir,—Can you tell us why it is that the Lord Mayor of Manchester, who stated the other day that if he had 100 sons he would put them all to the profession of chemists and druggists, and make them pass the necessary examinations, has not put his three sons to the profession, nor ever tried to do so!

Yours truly,
Manchester, April 9. Three Inquirers. (142/64.)

A Contradiction.

Sir,—It has come to the knowledge of the directors of Dr. Tibbles' Vi-cocoa (1898) (Limited) that a report is in circulation that a Mr. Harness is in some way connected with or interested in the business of Dr. Tibbles' Vi-cocoa (1898) (Limited). Will you permit me to contradict this report publicly in your columns? It is wholly without foundation. I speak with authority on the matter, for I am now secretary to the present Vi-cocoa Company; I was secretary to the former Vi-cocoa Company during the whole period of its existence, and I was in the employ of the owners of the business before either company was formed. Hence I am in a position to state positively that no person of the name of Harness has ever been in any way concerned or interested in or in any way connected with that business or either company.

Yours faithfully,
G. Brooke Smalley,
Secretary to Dr. Tibbles' Vi-cocoa (1898) (Limited).
60, 61, & 62 Bunhill Row, London, E.C.
April 13.

DISPENSING NOTES.

This section is intended for the elucidation of dispensing difficulties. Subscribers and their employés may contribute to it, criticising any of the following notes or contributing notes on prescriptions which they have found to be of unusual interest.

Should a Lotion be Sent out?

Sir,—What should be dispensed for:—

Boracic crystals ... ... ℥j.
Solve ʒj. ex aq. ℥viij. pro lotio.

Apprentice. (144/66.)

[We take it the doctor wants the patient to make a lotion by dissolving a teaspoonful of crystal boracic acid in 8 oz. of water.]

A Familiar Reaction.

Sir,—Will you kindly say the cause of a precipitate in the following mixture?—

Ammon. chlor. ... ... ℥ss.
Aq. cinnamom. ad ... ... ℥vj.
Solve et adde—
Potass. bicarb. ... ... ʒvj
Aq. cinnamom. ad ... ... ℥vj.

Carrick. (143/39.)

[The ammonium carbonate formed, being less soluble than the chloride of ammonia and bicarbonate of potash, is precipitated.]

Lin. Plumbi c. Sapone.

Sir,—What is lin. plumbi c. sapone? It is ordered by a medical man, who says that it is frequently prescribed by Buxton doctors. Linimentum. (145/9.)

[Perhaps some of our Buxton subscribers can give us a formula for this.]

LEGAL QUERIES.

We do not give legal opinions by post. Information regarding most legal matters in connection with pharmacy will be found in The Chemists' and Druggists' Diary, *and in "Pharmacy and Poison Laws of the United Kingdom," and Alpe's "Handy-book of Medicine-stamp Duty."*

140/53. *Hemat*.—The registration of a company is not a matter of any difficulty. You will find the principal details set out in The Chemists' and Druggists' Diary, page 214*, and more fully in some previous Diaries. It will save you a good deal of trouble, however, to employ a London solicitor-agent. We will send you the name of one if you wish it.

142/52. *C. M.*—No unregistered person may sell scheduled poisons in any form. It makes no difference whether the compounds are for cattle or for human beings. But the Act does not prevent qualified veterinary surgeons from dispensing poisons for animals under their care.

145/7. *Lindum.*—If the toilet-articles are imported as they are sold in France, with French labels, and no indication of English about them, it is not necessary to stamp them or label them "Made in France." But if an English label is affixed to them, or if the case in which they are contained bears English words, then it is necessary to mark either the articles themselves or the carton (as the case may be) with the words "Made in France" or "Made Abroad."

140/55. *Acetum.*—Your difficulty is not a serious one. The doctor's statement is so nearly correct that you might let it pass; but if it is necessary to be strictly accurate, your customers will probably accept your chemical knowledge in preference to his.

142/51. *Assistant.*—An unregistered person takes a legal risk under the Pharmacy Act if he sells paregoric, or another under the Sale of Food and Drugs Act, or under the Merchandise Marks Act if he sells paregoric with no opium. It is not the object of this column to suggest ways in which these useful Acts can be evaded.

143/41. *Joseph.*—You can make an artificial Carlsbad salt, but we think you would not be entitled to describe it as "effervescent Carlsbad salts" without making it clear that the preparation is not the natural Carlsbad salt.

140/14. *W. B.* ordered certain goods, and at the request of the representative signed the order. The next day he cancelled the order; but two or three weeks after the goods were sent to him. He refused to receive them, and carriers are still holding. Can he be compelled to accept them? [It is a common error to suppose that a person can cancel an order which has once been accepted; it is quite different to withdrawing an offer before acceptance. When an order has been given and accepted, it becomes a binding contract, and it can then only be rescinded by mutual consent. We should say in this case "W. B." is bound to receive and pay for the goods, or pay damages for non-acceptance.]

MISCELLANEOUS INQUIRIES.

Notice to Querists.

We reply to our subscribers and their employés only; queries must, therefore, be authenticated by the name and address of the subscriber. When more than one query is sent write each on a separate piece of paper. When a sample accompanies a query full particulars regarding the origin and use of the sample must be given, and the name of the querist should be placed on the sample. Queries are not replied to by post.

138/9. *J. H.*—**Jam-manufacture** is dealt with in "Skuse's Complete Confectioner," 7*s.* 6*d.* (Bush, Artillery Lane, E.C.). **Pickles.**—Cooley in vol. 2 of "Cyclopædia of Receipts," treats of these fairly fully. The other matters are dealt with in "Pharmaceutical Formulas," which will be ready very soon now.

139/27. *Rhei.*—A few experiments will soon determine what you ask, and these you are as able to perform as we are.

135/34. *Almanack.*—It is only a very weak solution of caustic soda that is used for boiling silk in to take the gum &c., out before weaving. The exact strength we cannot say.

135/49. *Angler.*—**Preserving Minnows** for fishing-purposes. The following solution answers the purpose:—

Formalin	ʒj.
Glycerine	ʒj.
Water to	Oj.

5/4. *H. H.*—Quinine pessaries contain 2 to 5 gr. of hydrochloride of quinine. The base is cacao-butter.

139/34. *Euclid.*—Clean off the mould from the picture with indiarubber and expose to the vapour of formaline for some hours. This treatment will effectually destroy the mould.

139/20. *J. W.*—Stick the labels on your shop-bottles with paste, and when dry varnish with the following:—

Sandarac	3 oz.
Mastic	1 oz.
Canada balsam	1 oz.
Spirit	17 oz.

solve.

138/51. *J. G. J.*—The following modification of your **Metol-quinol Developer** will be an improvement:—

Metol	200 gr.
Quinol	60 gr.
Soda sulphite	3 oz.
Potash metasulphite	ʒvj.
Potash bromide	40 gr.
Potash carbonate	ʒiss.
Water to	℥xl.

ilute with an equal amount of water

133/34. *Beta.*—We understand that the antiseptic throat-pastilles are a proprietary lozenge of the Liverpool Throat Hospital, the profits from the sale of them being devoted to hospital purposes. Messrs. Evans, Sons & Co., Liverpool, are the manufacturers

144/10. *X. Y. Z.*—**Concentrated Weed-killer.**—Se *C. & D.*, November 20, 1897, page 811.

142/42. *A. B. C.*—**Gelatin Capping-solution.**—This w. last published in *C. & D.*, September 26, 1896, page 504.

144/57 *R. W. B.*—Dissolve a pound of nickel sulphate in a gallon of water and dilute to required tint for **Green Carboy-solution.**

144/46. *Metol.*—Two 10-oz. bottles of the pyro-metol developer (*C. & D.*, April 2, 1898, page 546) sell t 1*s.*

144/65. *S. V. R.*—**Dry Shampoo.**—See *C. & D.*, July 31 1897, page 219, and May 8, 1897, page 743.

143/39 *Carrick.*—(1) **Ginger-wine**:—

Bruised ginger	8
Raisins	4
Rinds of 7 lemons and 2 Seville oranges.	
Loaf-sugar	18 lbs.
Boiling water	6 gals.

Pour the boiling water on the ingredients in a tub, and cover p closely till next day, then add the juice of the lemons and oranges and 1 oz. of isinglass, strain, and add two tablespoonfuls of yeast. Ferment three days, and close the cask. Set aside for six weeks, again strain, and four weeks later bottle.

(2) Steel is hardened by heating to certain temperatures (according to the purpose the steel is going to be put to) and slowly cooling. Case-hardening (the process by which small articles of iron are superficially converted into steel) is performed by heating the articles in contact with powdered charcoal or by making them red hot and sprinkling on them powdered ferrocyanide of potassium.

141/65. *Cucumber.*—We published formulas for **Glycerine-and-cucumber** in *C. & D.*, January 23, 1897, page 139, and March 20, 1897, page 487, both of which are good.

143/69. *Nemo.*—(1) There is no prohibition in this country of the use of boric acid in meat or milk. (2) Boric acid and formaline are both used for milk; the latter is coming largely into use for this purpose. (3) **Stimulating Embrocation.**—See *C. & D.*, December 11, 1897, page 937.

143/74. *Professor.*—Preparation for the Major would be good discipline for you, but a study of the following works would give you "a more comprehensive grasp of pharmaceutical literature than is necessary for the Minor":—Caspari's "Pharmacy," "Pharmacographia," Van t' Hoff's "Atoms in Space," Behren's "Botany" by Geddes, Perkin and Kipping's "Organic Chemistry," Huxley's "Physiology," and Brunton's "Materia Medica and Therapeutics."

141/68. *W. G. D.*—Weed-killers.—Use either spirit of salt and water, equal parts, or solution of arsenic (*C. & D.*, November 20, 1897, page 811) for destroying weeds on garden-paths.

140/55. *Acetum.*—Removing aniline marking-ink.—See *C. & D.*, March 12, 1898, page 456. Cyanide of potash is only of use for silver-ink stains.

141/12. *E. S. C.*—We ignore anonymous communications.

141/63. *Beta.*—Cloth-merchants test indigo-dyed cloth by observing its behaviour when treated with nitric acid. If indigo-dyed the colour remains fast.

34/32. *Cyclist.* — The formula for **Raspberry-wine Essence** was given in *C. & D.*, January 30, 1897, page 175.

143/21. *Solis.*—(1) **Essence of Pineapple**:—

	Parts
Ether amyl-acetic	1
Ether amyl-butyric	10
Ether butyric	5
Glycerine	3
Oil lemon	·1
Oil orange	·2
S.V.R....	100

(2) **Essence of Cherry**:—

	Parts
Ac. benz.	1
Ether acetic	5
Ether benzoic	5
Ether œnanthic	1
Glycerine	3
S.V.R....	100

To make these essences soluble mix with an equal bulk of water and filter bright through kaolin.

117/62 *Subscriber, Devon.*—The **Headache-powder** is acetanilide. Heated with a little caustic potash and a drop of chloroform the odour of phenyl-isonitrile is given off.

INFORMATION WANTED.

The Editor will be obliged for replies to the following from any who can furnish the information.

141/60. "Payne's Business Record": where obtainable?

143/60. Maker of "Blanco."

144/67. Address of maker of "the new Macadam's horse malt animal stimulant."

146/9. "Inksorbent" for removing ink-spots: where obtainable?

146/9. I.R. medicine-glass covers, patentee's name believed to be Day: where obtainable?

144/90. Where can male fern rhizome be obtained in quantity?

INFORMATION SUPPLIED.

Subjoined are notes and formulæ received from subscribers. Similar information is always welcome.

Corn-oil.—*A. G.* (140/64) sends us a sample of soft-soap made with corn-oil, which, he says, is an improvement on ordinary soft-soap, in that it does not deliquesce on exposure to air and has no unpleasant smell. The sample is of good consistence and clear yellow in colour. "A. G." also adds that corn-oil makes a first-class fish-frying oil, going a little farther than cotton-seed oil. The slight taste possessed by corn-oil is not communicated to the fish. The oil remains bright above freezing-point.

Coming Events.

We insert notices of association and society meetings in this section free if they are sent to us, on postcards, by the Wednesday of the week before the meetings are to be held.

Monday, April 18.

Society of Arts, John Street, Adelphi, W.C., at 8 P.M. Cantor Lecture.—I. "Sources of Commercial Indiarubber," by Dr. D. Morris.

Tuesday, April 19.

Irish Pharmacists' Assistants' Association. Annual dinner at the Gresham Hotel, Dublin.

Streatham, Balham, and Tooting District Chemists' Association, at 14 Greyhound Lane, opposite Streatham Common Station. Meeting.

Wednesday, April 20.

Pharmaceutical Society of Great Britain (North British Branch), 36 York Place, Edinburgh. Evening meeting at 8.30. "Oxygen for Therapeutic Purposes," with exhibition of apparatus, by Mr. G. Lunan. "Invisible and Sympathetic Inks," "Methylated Spirit in Photography," "An Incompatible Strychnine-mixture," by Mr. J. R. Hill.

Midland Chemists' Assistants' Association, Exchange Restaurant, Birmingham. "The New Pharmacopœia" or "Specific-gravity Methods," by Mr. F. H. Alcock.

Royal Microscopical Society, 20 Hanover Square, W. At 7.30 P.M., Exhibition of Diatoms by Mr. H. Morland. At 8 P.M., "On some Organic Substances of High Refractivity available for mounting Specimens for Examination under the Microscope," by Mr. H. G. Maclan. Instantaneous photomicrography by Mr. E. B. Stringer.

Western Chemists' Association, at the Westbourne Restaurant, Craven Road, W., at 9 P.M. Musical and social evening.

Thursday, April 21.

Chemical Society, Burlington House, at 8 P.M. "The Carbohydrates of Barley-straw," by Messrs. C. F. Cross, E. J. Bevan, and Claud Smith. "Isomeric Bornylamines," by Mr. M. O. Forster. "Some Derivatives of Benzophenone," by Mr. F. E. Matthews. "Researches on Camphoric Acid," by Mr. S. B. Schryver. Ballot for the election of Fellows.

Chemists' Assistants' Association, 73 Newman Street, W., at 9 P.M. Musical and social evening.

Friday, April 22.

National Photographic and Allied Trades' Exhibition, Portman Rooms, Baker Street, W. From 12 noon till 10 P.M. Daily till April 30.

Royal Institution of Great Britain, Albemarle Street, Piccadilly, W., at 9 P.M. "The Recent Eclipse," by Mr. W. H. M. Christie, C.B., F.R.S., Astronomer Royal.

The Annual Dinner of the Pharmaceutical Society will be held at the Victoria Hall, Hotel Cecil, on May 17.